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The euro

France woos its doubters

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El Niño

Big impact of small climate change

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Diabetes drug

Warner-Lambert and Sankyo tremble

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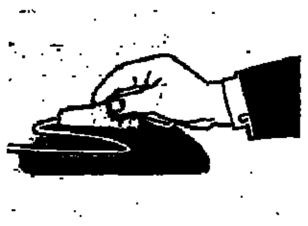

Today's Surveys

FT-IT Monthly Review

Indian Software

Separate sections

World Business Newspaper http://www.FT.com WEDNESDAY DECEMBER 3 1997

WORLD NEWS

President and chief justice of Pakistan both decide to quit

Pakistan's president Farooq Leghari has resigned unexpectedly after a bitter stand-off with PM Nawaz Sharif that brought the country to the brink of a constitutional crisis. Combative Supreme Court chief justice Sajjad Ali Shah also quit. Page 16; Pakistan army provides cover, Page 4

Reshuffle in Romania
Romanian PM Victor Ciorbea has pleased western observers and reformers at home with a major cabinet reshuffle. Page 3

UK warned over Euro
The UK has been warned that other EU countries will ignore its objections to the Franco-German "euro-club" for countries entering the single currency in 1999. Page 8; Editorial Comment, Observer, Page 15

Prodi faces jobs battle
Italy's PM Romano Prodi is trying to patch up a quarrel within his ruling centre-left coalition over appointments to prominent private and public bodies. Page 3

Nato plans new Bosnia force
Nato has begun planning for an international force in Bosnia after June 1998, although the US would make no commitment that its troops would stay on. Page 2

French try to avoid EU clash
France tried to dissuade Spain from a clash at next week's EU summit in Luxembourg over Madrid's campaign to preserve aid programmes. Page 3

F1 must cut tobacco sponsors
Formula One motor racing will have to show it is cutting back tobacco sponsorship each year to keep any exemption from an EU ban. Page 8

Kyoto talks hit snag
Disagreements over the role of developing countries have become a stumbling block during this week's international climate change talks in Kyoto. Page 6

Soccer World Cup seedings
The seedings for next year's soccer World Cup have been announced in Marseilles. Holders Brazil and hosts France are joined by Italy, Germany, Spain, Argentina, Holland and Romania.

China backs Taiwan role
China has left open the possibility that Taiwan might contribute to regional financial rescue packages. Page 4

DVD audio discussions
Record industry chiefs are to meet in New York next week to assess proposed technologies for DVD Audio. Page 7

India raises rates
India's central bank has raised interest rates in a bid to put a floor under the rupee. Page 4

Road toll set to rise
Road accidents will become the third biggest cause of premature death by 2020, said a report from the World Health Organisation, World Bank and Harvard School of Public Health. Page 5

Hero's welcome for Mugabe
Zimbabwe's president Robert Mugabe can expect a hero's welcome at the ruling Zanu-PF party's congress, after his land acquisition plan. Page 6

Japan may abolish store laws
Japan is considering plans to abolish a controversial law governing retail stores which has long been a symbol of the country's closed markets. Page 4

Scales of justice
The Vienna Boys' Choir is to admit girls for the first time since it was founded in 1498 – but only to its elite music school, not to the choir itself.

BUSINESS NEWS

Ericsson set to shed 10,000 employees in restructuring

Swedish telecommunications group Ericsson plans to cut up to 10,000 jobs in its public switching and fixed network business as part of a wide-ranging restructuring. Ericsson's most commonly traded B shares fell SKr8.5 to SKr317. Page 17

Confusion over Lord Moyne's involvement in Trustor, the Swedish investment company caught in a SKr620m ($81.5m) fraud inquiry, deepened when it emerged he sold his stake to a Virgin Islands company more than a month ago. Page 20

Stockholm stock exchange's leading members have reservations over the revived merger between the exchange and OM Gruppen, the Swedish derivatives exchange. Page 20

Degussa, the German chemicals, metals and healthcare company, raised pre-tax profits 27 per cent to DM523mn ($294m) in the year to September 30 and forecast a further improvement. Page 18

Malaysian businessman Dato Amin Shah is to pull out of an agreement to buy a 48 per cent stake in Danyard, Denmark's second largest shipyard, following the Malaysian crisis. Page 19

LVMH, the French luxury goods group which owns Louis Vuitton luggage and Möet-et-Chandon champagne, is merging its perfume and cosmetics interests into a single division. Page 20

Fokker creditors may receive only a fraction of the Fl 26bn ($13bn) in claims against the collapsed Dutch aircraft maker. Only Fl 1bn is so far available to pay out. Page 18

Cremonini, Italy's leading food processing group, will today announce plans to raise L250bn ($146m) through a high-yield bond issue. Page 19

Candidates to buy CIC, the French state-controlled banking network, must agree to sell the insurance products of parent company GAN for up to 10 years, according to offer documents. Page 20; Observer, Page 15

Patriot American, the hotels group, pulled off its third big takeover this year with the $1.3bn purchase of Interstate Hotels, the largest independent hotel management company in the US. Page 17

Hongkong Telecom, the territory's dominant carrier, is seeking to buy Hong Kong's fourth biggest mobile telephone operator, Pacific Link Communications, the two companies said. Page 17;

Hewlett-Packard and Electronic Data Systems have joined with eight leading financial institutions to develop internet banking and commerce. Page 19

VideoLogic shares fell 10 per cent after the 3D graphics specialist announced doubled losses, restructuring and the retirement of founder and chief executive Tony Maclaren. Page 23

Fuji Photo Film will next year quadruple output of cameras in China for export in an attempt to strengthen its position in the expanding global market for digital and advanced photo system (APS) cameras. Page 18

Cabletron Systems, one of the top four networking equipment makers, said its earnings would fall short of expectations in its third quarter. Page 17

Assets of Yamaichi, Japan's fourth-largest broker which collapsed last week, could be sold within the month. Page 18

Russia asks western banks for emergency $2bn loan

By John Thornhill and Chrystia Freeland in Moscow and Edward Luce in London

The Russian government has asked a group of western banks in Moscow to prepare an emergency financing package of up to $2bn as it seeks to cover its budget deficit and pay off wage arrears.

On Monday, Anatoly Chubais, first deputy prime minister, contacted at least four banks, including Salomon Brothers, Credit Suisse First Boston, Chase Manhattan and Deutsche Morgan Grenfell, asking to raise a syndicated loan for the government.

$31bn debt deal signed ....Page 2
Lex ....Page 16

None of the banks would comment yesterday, but it is understood they reacted positively.

"Foreign banks have been involved in this type of bridging loan before, but it has not been publicised," said one banker who knew of the deal. "I do not think it would be a problem."

In a further effort to shore up Russia's jittery financial system, the chairman of the central bank summoned the heads of Russia's leading banks yesterday to discuss the current liquidity crunch.

It is understood the central bank reassured Russian commercial bankers it was ready to assist the country's top banks.

"For the central bank the collapse of any of the largest banks would be undesirable," said Irina Yasina, the bank's spokeswoman, after the meeting. She said the 10 commercial banks and the central bank had pledged jointly to back the rouble.

In London, Russia signed an agreement with 423 western banks to restructure $31bn of defaulted commercial debt dating from before the Soviet Union's demise in 1991. The deal creates a vast bond market in the former loans which should become one of the world's most highly traded emerging market instruments.

In addition to propping up Russia's shaky economy, the $2bn loan Mr Chubais is seeking could help resurrect the minister's own fading political fortunes.

"They will say: 'Again Chubais has saved the motherland!'" said a top Russian businessman who is familiar with the deal and hostile to the controversial minister.

At yesterday's meeting, the central bank also urged Russian banks to begin trading with one another again.

The Russian government is hopeful the International Monetary Fund will accelerate disbursement of a delayed $700m tranche of its $10bn support loan before the end of the year. That may also trigger the release of structural adjustment and coal sector loans from the World Bank.

But the government appears to be making contingency plans in the event that these monies are not forthcoming and is seeking additional finance from both local and foreign banks. One Russian banker said the creation of a domestic emergency fund was also discussed at the meeting in the central bank.

Boris Yeltsin, the president, has warned that ministers' heads will roll if the government does not fulfil its promises to pay off wage arrears to federal employees by the end of the year.

The instability in world financial markets has significantly increased the Russian government's cost of borrowing, as foreign investors have started pulling out of the domestic debt market, putting upward pressure on interest rates and downward pressure on the rouble.

Yields on short-term treasury bills soared from 35-40 per cent to more than 50 per cent at one point yesterday. This compares with the central bank's refinancing rate of 28 per cent.

The central bank yesterday reiterated its commitment to maintain the rouble within its trading corridor amid signs that the Russian public was beginning to buy more dollars.

Holocaust survivors' fund launched

Edgar Bronfman, president of the World Jewish Congress, at the London Conference on Nazi Gold yesterday, where the US and UK gave $5.6m to a new Holocaust survivors' fund. Mr Bronfman said Switzerland still owed $2bn-$3bn of looted gold at today's values Nazi gold fund, Page 2 Picture Ashley Ashwood

Number of nations set to sign landmine ban treaty doubles

US and China among countries absent from ceremony

By Frances Williams in Geneva

About 110 countries are expected to endorse an international treaty banning anti-personnel landmines at a signing ceremony in Ottawa that begins today. This is more than twice the number of countries that originally backed a ban.

The two-day ceremony marks the culmination of a six-year campaign by human rights organisations, including the United Nations and the International Committee of the Red Cross, to outlaw all forms of anti-personnel landmine (APM).

Today's signing also represents a diplomatic triumph for Canada, which launched an initiative for a global ban after UN talks concluded in May 1996 with agreement merely to limit some types of mine within nine years.

However, a number of key countries – the US, Russia, China, India, Pakistan and most Middle Eastern nations – will not be signing the treaty this week. The US, which said it would end APM use by 2006, pulled out of talks in Oslo after failing to obtain exceptions for the Korean peninsula. South Korea has also decided not to sign the accord.

Russia supports a ban in principle and may sign the Ottawa treaty eventually. Yesterday, the Kremlin said Boris Yeltsin, the president, had signed a decree extending a ban on the export of certain APMs for another five years.

Some 26,000 people, mostly civilians, are killed or maimed by landmines each year – one victim every 20 minutes, according to the ICRC – and large areas of land, including fertile farmland, have become unuseable.

The accord, the text of which was finalised at a meeting in Oslo in September, bans the use, production, stockpiling and transfer of APMs. After 40 countries have ratified it – perhaps within two years – signatory states have four years to destroy their stockpiles and 10 years to clear mines already laid.

About 50 nations backed Canada's initiative at a conference in Ottawa in October 1996, a figure that has since more than doubled. This week's signatories will include leading mine producers and users, among them the UK, Belgium, France, Hungary and Italy. Japan, which has a stockpile of about 1m mines, announced last week it too would sign the treaty.

The momentum gained by the so-called "Ottawa process" was spurred by the work of the International Campaign to Ban Landmines, which in October was awarded the Nobel Peace Prize. It benefited from publicity by Diana, Princess of Wales, before her death in August.

Russia and the US still hope to negotiate a global ban through the Geneva-based UN disarmament conference whose 61 members include all five permanent members of the UN security council.

But attempts to launch treaty talks have so far been stymied by developing countries that want parallel negotiations on nuclear disarmament, a demand refused by the nuclear powers.

Meanwhile, attention is being focused on clearing the world's 110m mines and helping civilian victims in some 70 countries.

Opera chiefs ready to defy MPs' call to quit

By Antony Thorncroft in London

Senior managers of the UK's Royal Opera House were last night set to resist demands for their resignation expected in a critical report to be published today by the Commons committee on culture, media and sport.

"We have been completely open about the state of Royal Opera House affairs with the committee," said Lord Chadlington, Covent Garden's chairman. "The board and management have always sought to do what is best.

"We will be expressing our views on the report in due course but in the meantime we will continue, with our rescue package in place, to manage ourselves as effectively as we have been doing since our new management team was put in place."

The committee, chaired by Gerald Kaufman, an MP in the ruling Labour party, started investigating the Opera when it ran up substantial debts following its closure in July for a £214m ($357m) refurbishment of its Covent Garden premises, likely to be completed by December 1999.

There was also disquiet over the sudden appointment of Mary Allen, formerly secretary-general of the Arts Council, as chief exec-

Continued on Page 16
Turner prize, Page 10

Markets

STOCK MARKET INDICES		
New York: lunchtime		
Dow Jones Ind Av	8015.10	(+1.99)
NASDAQ Composite	1614.20	(−16.52)
Europe and Far East		
CAC40	2913.09	(−5.39)
DAX	4072.56	(+4.91)
FTSE 100	4977.8	(+55.8)
Nikkei	16910.29	(−97.30)
US LUNCHTIME RATES		
Federal Funds	5⅝%	
3-mth Treas Bills: Yld	5.239%	
Long Bond	101¼	
Yield	6.034%	
OTHER RATES		
UK: 3-mo Interbank	7⅞%	(same)
UK: 10 yr Gilt	105.6563	(105.437)
France: 10 yr OAT	100.88	(100.4)
Germany: 10 yr Bund	104.27	(103.98)
Japan: 10 yr JGB	108.83	(108.87)
NORTH SEA OIL (Argus)		
Brent Dated	$17.88	(18.025)

GOLD		
New York: Comex		
(Dec)	$294.4	(294.3)
London	$294.65	(293.75)
EXCHANGE RATES		
Dollar		
New York: lunchtime		
£	1.682	
DM	1.775	
FFr	5.941	
SFr	1.43235	
Y	128.6	
London		
£	1.6823	(1.6845)
DM	1.7746	(1.7774)
FFr	5.94	(5.9479)
SFr	1.4325	(1.4327)
Y	128.885	(129.27)
Tokyo close		Y 128.6
Sterling		
DM	2.9854	(2.9839)

London · Leeds · Paris · Frankfurt · Stockholm · Madrid · New York
Los Angeles · Tokyo · Hong Kong

Bahrain	Din1.500	Belgium	BFr60	Cyprus	C£1.25
Denmark	DKr21.00	Estonia	EKr24.00	Finland	FM19.00
France	FFr12.50	Gibraltar	£0.75	Greece	Dr450
Hungary	Ft340	Iceland	IKr205	Jordan	[illegible]
Kuwait	Fils750	Latvia	Ls 1.05	Lithuania	[illegible]
Luxembourg	LFr60	Morocco	Dh16.00	Netherlands	Fl5.00
Nigeria	[illegible]	Norway	NKr23.00	Oman	[illegible]
Poland	Zl 7.50	Portugal(cont)	Esc300	Qatar	QR13.00
S.Arabia	SR13.00	S.Africa	R12.00	Spain	Pta275
Sweden	SKr22.00	Syria	SP 60.00	Switzerland	SFr3.20
Tunisia	Din2.000	UAE	Dh13.00		

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TECHNOLOGY

FINANCE

EMERGING MARKETS

US and UK give $5.6m for compensation to Holocaust survivors

Cook launches Nazi gold fund

By David Buchan and William Hall in London

Britain and the US launched a 41-nation conference on Nazi gold yesterday by announcing gifts of $5.6m to a new compensation fund for Holocaust survivors and by calling on other countries to make matching contributions.

"We must avoid the second tragedy of those who survived the Nazis being left to live out their days in poverty," said Robin Cook, UK foreign secretary.

Speaking on behalf of the Tripartite Gold Commission (TGC), which includes the US, UK and France, Mr Cook appealed to those governments which have received gold from the Commission over the years to allow a remaining 5.5 tonnes of it to be used to compensate individual Nazi victims.

He suggested these countries could either spend their share of this gold on Holocaust survivors at home, or put it into the new fund, now established at the New York Federal Reserve with the UK government as the account-holder.

Stuart Eizenstat, US under-secretary of state, said the US administration was putting $4m into the fund as a first payment of a US contribution that, with congressional approval, could rise to $25m over three years.

Mr Cook said that he had received "a positive response" from the 15 recipients of TGC gold, whose central banks were looted by the Nazis and which are all represented at the London conference.

But of the 15 recipients, only Luxembourg indicated yesterday it would give to the fund. Argentina, not a recipient of TGC gold but a wartime neutral to which many Nazis escaped at the end of the war, said it would also contribute.

France said it would not pay into the new fund because it is itself owed 2.2 tonnes of the Commission gold, which it plans to use to help Jewish groups in France.

France's failure to offer a symbolic contribution to the fund drew some criticism in the corridors of Lancaster House, the conference site.

Despite attempts by the organisers to keep the conference's tone measured, Switzerland again found itself in the dock for its central role in handling Third Reich gold.

Edgar Bronfman, president of the World Jewish Congress, says Switzerland still owes between $2bn and $3bn in today's values, based on the wartime declaration of the allies that all looted gold handled by neutrals must be returned.

Thomas Borer, head of the Swiss delegation to the conference, said there was "no objective basis" for Mr Bronfman's assertion.

He said Switzerland was "far ahead of other countries" in setting up its own SFr275m ($194m) Holocaust victims fund, and saw no need for his country to contribute to the fund newly established by the US and UK.

Deal is clinched on EU tax code

By Emma Tucker in Brussels

A landmark agreement to curb harmful tax competition between the 15 countries of the European Union has been clinched after a protracted argument between France and Ireland late on Monday night.

The breakthrough represented the first time EU member states had agreed proposals affecting direct taxation – a sensitive area which had been the sole preserve of national administrations.

The package includes a voluntary code of conduct on corporate taxation; a commitment to consider new legislation on an EU-wide withholding tax (on non-residents' savings income), plus an agreement to discuss a directive making it easier for companies to transfer interest and royalty payments across borders.

France, which fought hardest to have predatory tax regimes dismantled at the earliest possible date, said it was not "totally satisfied" with the package.

It had argued strongly for the code to include a deadline for the abolition of harmful tax regimes – notably Ireland's 10 per cent tax rate for manufacturers, which France and other countries accuse of siphoning off investment.

But Charlie McCreevy, the Irish finance minister, who must today steer a sensitive budget bill through parliament, made a powerful case for loosening the deadlines.

The final phasing out period agreed was five years – with an undefined longer roll-back period for Ireland "to avoid serious disruption of economic activity and employment in the case of new businesses and to take account of the reasonable expectations of businesses already established in Ireland".

The Commission – which had proposed a two-year phase-out – is confident peer pressure will discourage Ireland from exploiting its escape clause.

Yesterday's agreement hinged on a series of declarations tailor-made for each member state to soften its impact on sensitive sectors. Some signal potential trouble ahead, as the drive for greater co-ordination gathers pace. The Irish let-out clause on corporation tax is just one.

Others include a declaration by Luxembourg that it will not accept the introduction of any EU-wide minimum withholding tax rate unless it is balanced by legislation to enforce a minimum corporate tax rate – an idea rejected by Ireland, and likely to be rejected by many other member states, including the UK.

Nato plans new Bosnia force

By Alexander Nicoll in Brussels

Nato yesterday set in motion the planning for an international force in Bosnia after June 1998. But the US insisted it was making no commitment that its troops would remain there when the mandate of the present 34,000-strong Stabilisation Force expires.

At a meeting of defence ministers in Brussels, the way was also cleared for Nato to move ahead with a new streamlined command structure – incorporating Spain for the first time – when Britain lifted its objections.

However, the move remained conditional on eventual resolution of the UK's dispute with Spain over access to Gibraltar.

The British concession will allow Nato's military commanders to plan details such as the nationality of officers assigned to posts and manpower levels for the 20 command posts – reduced from the current 65 – in the new structure.

UK officials said the pressure was now on Spain. London wants Madrid to lift curbs on movement of ships and aircraft to and from Gibraltar, and says the Nato structure must not affect sovereignty over the Rock, while Madrid wants progress on the latter issue.

On Bosnia, Javier Solana, Nato secretary-general, said military commanders had been assigned to produce a range of options for a future force.

William Cohen, US defence secretary, said there should be an international presence after June 1998 but President Clinton had made no decision on US participation and Congress would ask tough questions before agreeing.

General Wesley Clark, the American commander of Nato's European forces, is understood to be arguing that fighting would rapidly resume if the Nato-led force were withdrawn in June, but that lasting peace could be achieved by one more big international effort. He believes the mandate of Sfor's successor could be broadened to strengthen military support for civil authorities.

Volker Ruhe, Germany's defence minister, said US participation was essential. "We will do everything to make it easier for the Americans to continue, even if that means taking on more of the burden ourselves." The follow-on force could be cut by as much as half.

President Yeltsin rides in the Swedish King's Royal Glass Carriage during his tour of the palace yesterday Reuters

No standing on ceremony as Yeltsin seizes the moment

By John Thornhill in Moscow

Boris Yeltsin, Russia's president, took an unexpectedly direct hand in trying to resolve a long-running Kremlin dispute yesterday in the unlikely setting of the Royal Palace in the Swedish capital of Stockholm.

As Russian dignitaries waited in line to be presented to King Carl Gustaf, Mr Yeltsin astonished the assembled crowd by dragging Rem Vyakhirev, chairman of the giant Gazprom gas concern, over to Boris Nemtsov, the first deputy prime minister.

"When will you sign the agreement?" Mr Yeltsin berated the two men as the Swedish royal entourage looked on. "Sign it right now. The king is waiting."

Mr Yeltsin, well known for his impulsive gestures, was referring to a trust agreement – defining the relationship between the government and Gazprom – which has yet to be signed after months of furious negotiation.

Mr Vyakhirev was supposed to sign the agreement last week but failed to return from a trip to Vietnam in time.

The reformist wing of the government, led by Mr Nemtsov, has been battling to bring Gazprom under greater state control and assert the government's rights as a 40 per cent shareholder in the company. Mr Nemtsov has been determined to overturn the previous trust agreement, which gave Mr Vyakhirev an almost completely free hand to run Gazprom as he liked.

But Gazprom, which has close links with Victor Chernomyrdin, the prime minister and former company chairman, has been resisting the government's demands. Itar-Tass, the official newsagency, quoted a government source yesterday as saying the agreement had "twice got lost" in Mr Chernomyrdin's office.

The proposed new trust agreement would still enable Mr Vyakhirev to manage the bulk of the state shareholding but would set strict performance criteria for the company.

Russia signs $31bn debt deal

By Edward Luce in London

Russia signed an agreement with 423 western banks yesterday to restructure $31bn of defaulted commercial debt dating from the Soviet era.

The deal, reached with the London Club of commercial creditors, opens the way for Russia to become a normal member of the international financial community, said Andrei Kostin, chairman of the Vneshekonombank, Russia's bank for foreign economic affairs.

The deal also creates a $28bn bond market in the former loans, which will count among the most liquid and highly traded emerging market instruments in the world. Russia transferred the remaining $3bn in past due interest to the creditor banks in New York yesterday.

"The closing of the London Club deal will pave the way for much broader co-operation between the Russian government, Russian banks and western banks," said Mr Kostin.

Russia also hoped that the agreement on the defaulted debt, which was held by more than 2,000 western creditors, would encourage US credit rating agencies to upgrade Russia to investment grade status in the near future.

However, analysts say the cash settlement of the "Vneshekon" debt on December 5 could prove costly to Russian banks which have invested heavily in an advance market for the bonds.

Grey market trading in the "Vnesh" bonds, which will have a maturity of up to 20 years, encouraged investors to bet heavily on the conclusion of the London Club negotiations.

But the precipitate fall in Russian bond markets since late October also knocked on to the ghost market in "Vnesh bonds", where prices have dropped from over 70 per cent of the paper's face value to less than 55 per cent since late October.

"Several Russian banks could be looking at heavy damage to their balance sheets on Friday," said a bond analyst at a US investment bank in London.

Mr Kostin conceded there would be "losses" among Russian banks, but said it would be in the "tens of millions of US dollars, not the hundreds of millions". "If they hold this paper they could recuperate their losses after some months," he added.

The price of Russia's existing dollar bonds rose on the news of the London Club deal.

Euro questions go unasked in France

The French government is selling the benefits of the euro to the public. **Robert Graham** asks if it would be wiser to warn of the risks

Some 22m copies of a booklet entitled "L'euro et moi" (The euro and me) are being distributed across France by the government to prepare people for the advent of the European single currency in January 1999.

The booklet claims to answer "the questions we are asking ourselves about the euro". The public is taken through the timetable for introducing the euro and shown basic aspects such as how the conversion will be made.

To familiarise people with the new prices, a notional purchase of artichokes is illustrated in francs and euros. Two of the 16 pages at the end briefly outline the benefits of joining the eurozone. Principal among these is said to be the outlook for jobs: "The euro opens up new economic horizons favourable for employment."

Yet the government's campaign risks being a double-edged weapon. Instead of reducing national scepticism about the new currency, it could expose just how poorly the problems have been debated in France and how little is known about the euro's political and economic impact.

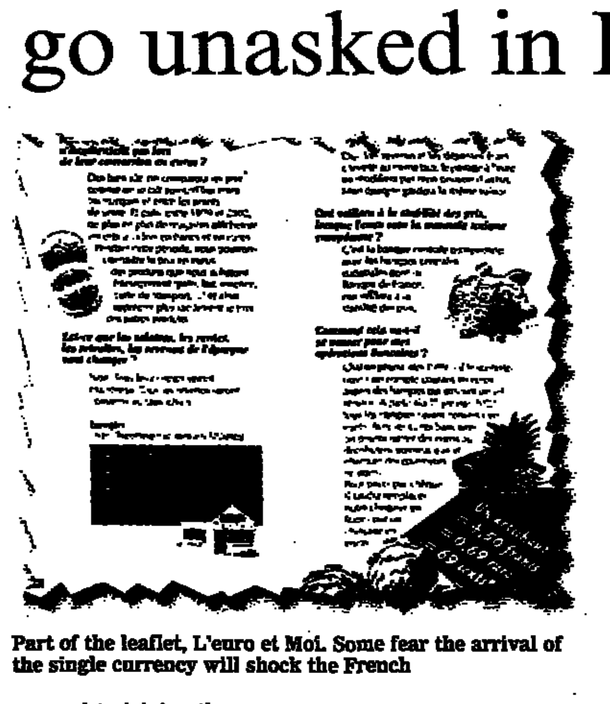
Neither the booklet, nor more detailed literature put out by the finance ministry, seriously answer the kind of questions about jobs and incomes which worry ordinary people.

Nor is the broader issue of loss of sovereignty addressed officially at any stage, despite the fact that politicians and commentators are starting to realise the magnitude of the shift of control of monetary policy from the Bank of France to the new European Central Bank.

The government has even kept quiet about the need to alter the constitution, as well as the statutes of the Bank of France, to accommodate monetary union. It has been reticent about the need for budgetary austerity beyond 2000 to ensure the public sector deficit is kept below 3 per cent of gross domestic product.

Rather the Socialist-led government has been so alarmed by the task of tackling 12.5 per cent unemployment that everything is packaged in terms of job creation, often regardless of whether the measures are suitable, as may be the case with the proposed 35-hour working week.

The situation is all the more curious because the government of Lionel Jospin, initially hesitant about the single currency when it took office in June, is now fully committed – even though its key ruling partners, the Communists, are formally opposed to joining the euro.



Part of the leaflet, L'euro et Moi. Some fear the arrival of the single currency will shock the French

Only last week Robert Hue, the Communist leader, publicly demanded a referendum on the euro. Mr Hue is not threatening to bring down the government, and his party's opposition to the single currency can probably be finessed.

But the Communists' doubts, shared by some Socialist deputies, fuel the climate of antipathy towards the euro and undermine the government's own endorsement.

An opinion poll conducted in October for the finance ministry showed 68 per cent of those questioned expected the euro's introduction would cause them problems. The ministry drew some comfort from the fact that 51 per cent thought the problems would be temporary.

Among the reasons for endorsing monetary union, the poll found that the most powerful was the idea of creating a counter balance to Japan and the US. While 72 per cent backed this view, only 56 per cent felt Emu would make the French economy more dynamic.

Rightwing politicians have seized on this poll as proof the French are not ready for the euro. A group of opposition backbench deputies, backed by such Gaullist veterans as Maurice Schumann, last week launched what they called "an appeal to realism".

They asserted in a manifesto that the switch from the franc to the euro would create a huge psychological shock. "The disappearance of the franc is not merely the disappearance of a unit of account, it throws a question mark round every citizen's point of reference.

"The worst thing of all is that this loss of a national reference is not apparently being compensated by an attachment to the European equivalent. The shock will be profound, distancing citizens even further from the European ideal."

Liberal opponents of the euro behind this manifesto warn that the single currency carries huge risks, without proper harmonisation of social and fiscal policies, against a backdrop of deregulation.

Rather than defending jobs, as the Jospin government suggests, the liberals see unresolved labour rigidities as encouraging unemployment.

More nationalistic critics lament the passing of the Bank of France's control over monetary policy and the hegemony of the German Bundesbank. They are not alone in this sentiment.

On the left, deputies were highly critical of the Bank of France's decision in October to raise interest rates when inflation was falling. They felt the move was unwarranted and dictated by the Bundesbank.

Against this background, if the government does not begin to spell out the risks in the countdown to the euro, the backlash will be more difficult to control should things go wrong.

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NEWS DIGEST

SPD urges financial curbs

Oskar Lafontaine, leader of Germany's opposition Social Democrats, rallied his party yesterday around a left-wing programme that would seek curbs on financial market speculation and set companies' social duties above shareholder value. Addressing a party congress in Hanover, he said Germany had lost its "sense of social responsibility" and called for closer European integration to be used for tackling mass unemployment.

His speech heightened the stakes in the battle to secure the SPD nomination as chancellor candidate in next September's federal elections.

Its pro-Europe and anti-business tone threw into starker contrast his differences with Gerhard Schröder, the prime minister of Lower Saxony, who is regarded as the more Eurosceptical and pro-business of the possible chancellor candidates.

Mr Lafontaine insisted that, despite global pressures, companies' initial responsibility was to their workers rather than to increase share values. It was not right that profits soared while real wages stagnated. The neo-liberal economics of Europe's conservative governments had triggered a "downward race" to cut wages, he said. Mr Lafontaine was re-elected SPD chairman taking 93.2 per cent of votes. *Ralph Atkins, Hanover*

■ RUSSIAN NUCLEAR WEAPONS

Kremlin plays down statement

A Kremlin aide last night played down President Boris Yeltsin's surprise announcement that Russia planned to cut its nuclear arsenal by more than 30 per cent.

During a three-day visit to Stockholm the Russian president said yesterday: "I announce here for the first time that unilaterally we will reduce the quantity of nuclear warheads by a further one third."

Mr Yeltsin, making no reference to his prepared speech about Russian-Swedish relations, told journalists: "It is now for us to take this matter to its conclusion and entirely destroy nuclear weapons."

However, Sergei Yastrzhembsky, a Kremlin official, said Mr Yeltsin was simply proposing to go somewhat beyond reductions already discussed with the US in preliminary talks on a future START-3 Treaty. Mr Yastrzhembsky [illegible] both sides had already agreed to work towards cutt[illegible] number of warheads to between 2,000-2,500 each.

"The president is not suggesting a new reduction. [illegible] president's feeling is that it is possible to go further [illegible] 2,500 warheads)," Mr Yastrzhembsky said. He stressed he was merely giving his own interpretation of Yeltsin's remarks. *Tim Burt, Stockholm, and agencies*

■ POLISH ECONOMY

Lower inflation is forecast

Poland aims to reach single-figure inflation next year for the first time in a decade as the current budget deficit of 1.9 per cent of GDP is lowered to 1.5 per cent in 1998.

A draft budget due to be presented to parliament today by Leszek Balcerowicz, finance minister, foresees this year's 13 per cent inflation falling to 9.5 per cent in 1998.

The document is a modified version of budget plans prepared by the previous leftist coalition which envisaged a budget deficit in 1998 of 1.6 per cent of GDP.

The main changes brought in by the new government include higher value added taxes on alcohol and tobacco, as well as on telecommunications and petrol, worth 2.2bn zlotys ($650m). The changes bring total revenues to 135bn zlotys. Overall spending plans, including 753m zlotys extra on repairing last summer's flood damage, are to grow by 2bn zlotys to reach 143.3bn zlotys, or 28 per cent of GDP. *Christopher Bobinski, Warsaw*

■ FRENCH NATIONALITY

Parliament to change laws

The French national assembly voted narrowly yesterday to change the country's nationality laws to make it easier for children of immigrants to acquire full citizenship.

The new law allows children born in France of non-French parents to acquire French nationality automatically at the age of 18, with proof of at least five years residence.

Non-French parents will also be able to apply for citizenship for their French-born children at the age of 13. Another change is to permit foreigners to acquire French nationality one year after marriage to a French national.

The issue was hotly contested in parliament by right-wingers, who sought tighter immigration controls. The vote was 267 for and 246 against. The legislation will now go to the senate. *Robert Graham, Paris*

■ RUSSIAN MINE DISASTER

Blast kills 59 in Siberia

In one of the worst mining accidents in recent decades, at least 59 Russian coal miners died yesterday when a methane gas explosion blasted through a Siberian mine.

The government declared three days of mourning and Boris Nemtsov, first deputy prime minister, was expected to rush back from a trip to Sweden to visit the Kuzbass, the impoverished region where the explosion occurred.

The accident at the Zyryanovskaya mine in the city of Novokuznetsk occurred just after 1am yesterday.

Some 130 people were working in the mine at the time. Another eight miners were missing yesterday evening.

The disaster underscores the dangerous working conditions of Russian miners, who eke out existences not noticeably improved since the advent of market reforms. *Chrystia Freeland, Moscow*

■ FT-FRESHFIELDS PRIZE

French student wins award

The 1997 Financial Times-Freshfields European Prize for the best business law student of 1997 has been awarded to Pauline Crouzillat of France. She received her award from Giuliano Amato, former Italian prime minister, at a reception in Rome's Palazzo Lancellotti on Monday night.

Ms Crouzillat, 21, is a final year law student at the Université Panthéon in Paris.

The second prize was awarded to José Maria Gómez Tabernero de Paz, 24, of Spain, who is studying European law at the College of Europe in Bruges.

The third prize went to Florian Wagner, 24, of Germany, a student at the University of Tübingen. All the candidates for the European prize final are selected in national competitions in the European Union.

Robin Pauley, managing editor of the Financial Times and chairman of the international panel of judges, said: "This prize has quickly established itself as one of the most prestigious awards for young law students. The calibre of the candidates is always outstanding and this year was no exception."

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NEWS: EUROPE

Italian MPs want new generation of modernisers

Prodi engulfed in squabble over jobs

By James Blitz in Rome

Romano Prodi, the Italian prime minister, is embroiled in a dispute within his ruling centre-left coalition over appointments to private and public sector bodies.

Following the resignation last week of Guido Rossi as chairman of the newly privatised Telecom Italia, Mr Prodi has faced demands from leading members of his coalition for a new generation of "modernisers" to be appointed to run some of Italy's leading bodies.

The resignation of Mr Rossi – who campaigned for the introduction of modern corporate governance rules inside Telecom Italia – has been viewed with disappointment by leading figures within the Party of the Democratic Left (PDS), the core of the Olive Tree alliance.

Senior PDS figures have argued that Mr Rossi's defeat at the hands of Tomaso Tommasi di Vignano, the chief executive, ensures that the company will retain a centralised management style, which was little different from when the organisation was run by Iri, the state holding company. Mr Prodi and senior ministers insist they have had no hand in the departure of Mr Rossi, arguing that Telecom Italia is now a private company and that management issues are solely a matter for its board.

The prime minister's office also dismissed claims that Mr Prodi – who was president of Iri for more than a decade – is leading a so-called "Iri club" that is trying to keep old-style Italian apparatchiks in office.

However, Mr Rossi's departure has triggered demands from leading PDS figures for "new names" to be appointed to forthcoming vacancies in leading regulatory bodies. These include a replacement for Giuliano Amato as head of Italy's "antitrust" competition authority and the appointment of Italy's first telecommunications regulator.

Marco Minniti, the number two figure in the PDS, spoke out recently in favour of a new generation of cadres at the top of Italian society. "We need to give birth to a new ruling class. We need to say stop to the recycling of old and tired faces. The criteria for selection must be rigorous and objective. Choices must be transparent, while competence and youth must be taken into account."

Mr Prodi yesterday held a meeting at his office in Rome's Palazzo Chigi with Massimo D'Alema, the leader of the PDS. The prime minister's office insisted there was no tension between the two men over the issue, even if Italian newspapers appeared confident the issue of public appointments would be aired.

The prime minister's office insists all appointments will be made objectively. But an editorial in La Stampa newspaper yesterday insisted appointments would still be resolved in face-to-face meetings between political heavyweights "just as they always have been."

Early Czech elections look likely

By Robert Anderson in Prague

The Czech Republic, until recently the most stable of the new democracies of central and eastern Europe, looked set yesterday for early elections next year to overcome a political crisis caused by the collapse of the centre-right government.

Vaclav Klaus, who resigned as prime minister last weekend, continued to refuse to make way for a compromise leader of the ruling Civic Democratic party (ODS) who could remake the three-party coalition. Mr Klaus has said he will stand for the leadership of the party he founded at an emergency congress on December 13-14, but that he will not be part of a new government.

The two other coalition parties withdrew from the government over allegations that the ODS had accepted illegal party donations from businesses in return for political favours. They will not return if Mr Klaus remains ODS leader.

On Monday a small majority of ODS deputies said they were in favour of Mr Klaus stepping down but the prime minister, who denies the allegations, has stronger backing among senators and

Czech President Vaclav Havel (right) with Vaclav Klaus, who resigned as prime minister last weekend. Klaus refuses to make way for a compromise leader of the Civic Democratic party who could remake the three-party coalition Reuters

party regional chiefs. So far no serious challenger has emerged. But Ivan Pilip, the finance minister, who called for Mr Klaus's resignation last week when Mr Klaus was in Sarajevo, has said he will be a candidate if no one else stands.

"The prime minister's position is still strong, especially in the regions. I don't see a strong challenger to him," said Jiri Weigl, chief adviser to the prime minister. "People are reluctant to support politicians who plot against their leader when he is out of the country."

Mr Klaus is thought to prefer the ODS should go into opposition until early elections can be called. He may be calculating that the result of these elections will vindicate him. "Early elections are inevitable," said Mr Weigl. "The question is when and by what mechanism." The opposition Social Democrats, which had a nine-point lead over the ODS in last month's opinion polls, have put forward a bill in parliament for elections. If both main parties support this, elections could be held by the summer. If a caretaker government takes office, it is unlikely that it will be able to carry through the current reform programme, including fast energy price deregulation and the privatisation of three of the biggest banks.

The sale of Investicni a Postovni Banka to Nomura, the Japanese bank, is due to be concluded this month. But analysts were sceptical about this timetable.

France tries to ward off EU clash

By David White in Salamanca

France tried to dissuade Spain yesterday from provoking a clash at a European Union summit in Luxembourg next week through its campaign to preserve EU aid programmes.

The Spanish government reaffirmed its view that the EU's eastward enlargement should not come at the cost of current grants, including the special "cohesion funds" paid to the community's poorest members.

The issue affects the EU's proposed budget ceiling of 1.27 per cent of gross domestic product. Spain fears this sum could be inadequate.

José María Aznar, Spanish prime minister, said there might be "some different visions in the short term" about the approach to admitting central and eastern European countries. He hoped for an agreement which allowed enlargement to go ahead without upsetting what he called "the basis of solidarity" among the current 15 members.

Jacques Chirac, French president, said that he understood Spain's reluctance to make concessions, and that France was also anxious to protect agricultural funding. "I am not willing, either, to accept an EU that calls into question the interests of France or its farmers," he said.

But he said the enlargement process was of capital importance and the EU should have the courage to reform its institutions before it took effect.

Rodrigo Rato, Spanish finance minister, highlighted French ministers' insistence on the need to guarantee funding for existing programmes, saying this appeared to mark a shift in its position.

Romania reshuffle provokes surprise

By Anatol Lieven in Bucharest

The Romanian prime minister, Victor Ciorbea, surprised and delighted western observers and Romanian reformers yesterday with a far-reaching cabinet reshuffle that replaced several leading political figures with respected technocrats.

The reshuffle had been under discussion for weeks. However, it was thought bitter infighting within the coalition would prevent change and reduce the exercise to a game of musical chairs.

The most important change involves the creation of a ministry for privatisation, to oversee the work of the state ownership fund and other government agencies. It is to be headed by Valentin Ionescu, a presidential economic adviser widely respected by western diplomats and economists.

This move, and the reshuffle in general, are meant to answer growing criticism that the reform process, particularly privatisation, had run out of steam.

Two widely criticised ministries have had their chiefs removed. The new industry minister is to be Mircea Ciumara, formerly minister of finance. He is being replaced by Daniel Daianu, deputy governor of the National Bank who is well regarded by international bankers.

The new minister for reforms, a department which in the past has overseen the government's attempts to open up the economy, is Ilie Serbanescu, a leading economist and commentator who in recent weeks has criticised the government over its failure to restructure or close state enterprises.

India raises interest rates to back rupee

By Krishna Guha in Bombay and Mark Nicholson in New Delhi

India's central bank yesterday raised interest rates and imposed a series of administrative controls in an attempt to put a floor under the rupee – which has fallen sharply following political turmoil in Delhi.

The political paralysis continued yesterday with neither Congress nor the opposition Bharatiya Janata party any closer to showing enough support from smaller parties to form a fresh coalition to replace the minority United Front government, which Congress deposed last week by withdrawing its lifeblood parliamentary support.

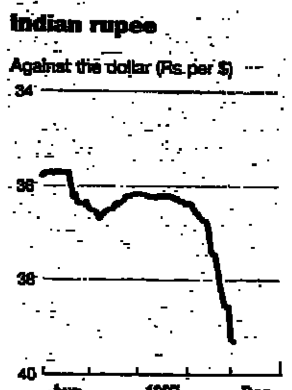
K.R. Narayanan, India's president, held further talks with party leaders, but seemed increasingly likely to dissolve parliament before the end of this week.

The uncertainty hit the rupee, which fell to an all-time low of Rs 39.87 to the dollar in early trading before news of the Reserve Bank of India's moves prompted a recovery.

The RBI announced that it was increasing its fixed-rate repo rate by 50 basis points to 5 per cent. It also raised the cash that reserve banks are obliged to deposit with it by 50 basis points. "The RBI is trying to squeeze liquidity out of the system," said Ramnath Iyer, strategist at Peregrine securities.

In a parallel move it banned foreign exchange dealers from offering forward contracts to a company without documentary evidence that it has exposure that needs to be hedged. This is to prevent forward speculation – which is illegal in India.

The action follows an earlier volley on Friday, when the RBI shelved plans to cut cash reserve requirements and increased interest on export credits in an attempt to force exporters to repatriate profits early.



Together, they mark the first concerted effort to call a halt to the rupee's depreciation – as it approaches what dealers describe as a "natural floor" of around Rs40 to the dollar.

This is the level at which foreign investors – who withdrew $90m from India in the first four weeks of November – may begin to re-enter the market.

The currency has now fallen by about 10 per cent since August – battered by a fall-off in foreign portfolio investment and the slow-motion collapse of India's United Front government.

Trade officials said they expected the rupee's depreciation to sustain a recent revival in exports.

Latest official figures this week showed a further modest rise, with exports in October 9.6 per cent higher, at $2.9bn, than the same month a year ago. Import growth slowed, rising by just 1.1 per cent to to $2.6bn compared to the same month a year ago.

Export growth, however, has averaged just 5.6 per cent between April and October, just over half the rate for the same period a year ago and well below the 24 per cent rate of increase recorded in 1995-96. India's cumulative trade deficit between April-October was 17 per cent higher at $2.67bn on the period last year.

Pakistan army provides cover for PM

Nawaz Sharif, Pakistan's prime minister, is today in charge of Pakistan chiefly because the army does not want to be.

After winning his long constitutional tussle with Farooq Leghari, the president, Mr Sharifhas come out on top of Pakistan's perilous political heap.

But that has much to do with a military hierarchy that has decided it no longer wants to govern Pakistan as it has done for half the 50 years of the country's independent existence.

During the past month, General Jehangir Karamat, the army chief, has intervened twice in the growing constitutional crisis, apparently in both cases to save Mr Sharif from premature downfall.

Mr Sharif's simultaneous challenge to the Supreme Court and the president had pitched Pakistan into unchartered constitutional areas, particularly since, soon after election in February, he removed the constitutional power of the president to depose prime ministers. The power, which had allowed the military indirectly to remove governments, had been used four times since the end of martial law.

On this occasion, Pakistan's military has chosen to side with an elected parliament rather than bring the tanks on to the streets. But the very fact that it took the chief of staff's interventions shows how qualified a victory it is for Pakistan's democracy and how politically important the military remains.

Gen Karamat held a two-hour meeting – not officially confirmed – with Mr Leghari yesterday before the president announced that he would resign.

The president's departure came at the same time as another of Mr Sharif's challengers, Sajjad Ali Shah, was removed from office by a rival Supreme Court bench.

The leadership of the 500,000-strong army is still a vital institution in important decisions, though the most recent military dictator died nine years ago. It is among the first to be consulted by civilian governments during moments of crisis.

However commendable Mr Sharif and his supporters might regard Gen Karamat's role in this particular crisis, however, it conceals a measure of dissatisfaction within the military with the prime minister's performance.

Mr Sharif's ruling Pakistan Moslem League has the backing of an overwhelming 82 per cent of the lower house of parliament but the benefits of that majority are increasingly lost on the average Pakistani, who has seen Mr Sharif become increasingly embroiled in what might be regarded as futile power struggles.

For instance, it is not clear what prompted Mr Sharif to confront the Supreme Court. Some critics say that he was motivated by a reckless desire to gain complete influence over other institutions.

Altaf Gauhar, a former bureaucrat and now a respected newspaper columnist, says dismissively: "To conspire for power is the only game our elite know how to play."

He claims that just weeks ago he had suggested to the prime minister that he should avoid a clash with the court. "I did advise them that this was a no-win situation. If you win you would be discredited and if you loose you will live with harsh consequences."

Some critics warn that in spite of Gen Karamat's tempering role in the recent crisis, the country's politicians must strengthen democratic institutions rather than rely on the military for help. "If you keep on calling upon the generals to sort out your mess, your political system only appears to be increasingly untenable," says a government official.

"While the general and his fellow senior officers are honourable men who want democracy to flourish, in the long term, strong democratic institutions are the only guarantee to our stability," he adds.

Farhan Bokhari

Bruising battle at Korea-IMF talks

South Korea is hoping the third time will be lucky. For two consecutive days, Lim Chang-yuel, Seoul's finance minister, has announced agreements with the International Monetary Fund only to see them unravel. He now expects to sign a formal deal this morning with Michel Camdessus, the Fund's managing director.

If an agreement is concluded today, it would end an arduous battle of wills between Korea and the IMF over the terms of a rescue that could exceed the $50bn bail-out of Mexico in 1995.

Disputes have included the schedule for closing of insolvent commercial and investment banks, economic growth targets and foreign investment in the capital markets, banking and corporate sectors.

The talks have been conducted against the background of a presidential election on December 18 that the government fears it will lose if the IMF loan terms lead to a sharp rise in unemployment, labour strife, and a possible run on the banks.

Even Seoul's decision yesterday to suspend the operations of nine of the nation's 30 investment banks until the year's end was regarded as a delaying tactic since Korea would only shut the banks in March if they were unable to improve their capital base. The IMF wants to close them immediately.

Bank workers protest yesterday against expected job losses in the financial sector Reuter

The swift shutdown of the suspended investment banks, some of which are owned by such leading conglomerates as Ssangyong, Shinsegae and Hansol, would eliminate a vital source of corporate financing for the highly-leveraged industrial groups.

Although Korea is living up to its reputation as a stubborn bargainer, analysts believe its brinkmanship is further damaging its dwindling credibility in international financial markets. "Korea is conducting the negotiations with the IMF as if it was haggling with a stall keeper in Namdaenum [Seoul's biggest open-air market]", said a foreign broker.

IMF officials are said to have complained about Seoul leaking details of the talks to the domestic media and encouraging public resistance to the IMF demands. This is considered bad etiquette since the IMF does not discuss the status of negotiations in progress.

When Seoul suggested that it planned to announce the outlines of an agreement yesterday, Mr Camdessus demanded it keep silent until he and the IMF board of directors approved any deal.

Some observers also blame the IMF's negotiators, led by Hubert Neiss, the IMF Asia-Pacific director, for the confusion as they apparently agree to terms that are then rejected by Mr Camdessus, who is under pressure from the US to strike a tough bargain with Seoul.

Bill Clinton, the US president, has suggested that Washington would participate in a IMF-led rescue of Seoul only if the IMF concluded "a strong agreement" that "would actually restore financial stability and confidence" in Korea.

"The IMF delegation has been out of its depth in tackling an advanced industrial economy. They are scared about driving the economy into collapse and are uncomfortable about the implications," said an US investment banker.

But time is running out for Seoul and its bargaining position weakens by the day. As the talks drag on and uncertainty grows, the Seoul stock market and the Korean currency, the won, plunge to record lows, while interest rates soar.

Meanwhile, Korea's dwindling foreign currency reserves increase the prospects of overseas loan defaults as foreign banks call in loans if Seoul does not get a deal quickly.

It appeared last night that Korea was offering more concessions to the IMF in a new frantic round of negotiations. Mr Lim's prediction of a final agreement may at last come true.

John Burton

Beijing to allow Taiwan a role in regional rescue

By James Kynge in Kuala Lumpur

China yesterday left open the possibility that Taiwan might contribute to regional financial rescue packages by saying it would not object as long as Taipei's aid was non-governmental.

Taiwan, which has foreign currency reserves of US$89bn, is seen as a leading candidate for future contributions to bail out ailing Asian economies, officials at a finance ministers' meeting in Kuala Lumpur said.

China regards Taiwan as a renegade province and has sought to counter Taiwan's efforts to raise its international profile. But in this instance Beijing appears willing to allow Taipei to disburse funds which would undoubtedly raise the island's standing with any country it helped.

"The position of the Chinese government is that Taiwan will always be allowed to do things on a non-governmental basis," said Liu Jibin, China's first vice-finance minister. "If it is non-governmental, we would not object."

Other south-east Asian officials pointed out that Mr Liu's statement did not mean that Taiwan would have to pledge private sector money. The reality is that Taiwan's government has engaged in various contacts with its mainland Chinese counterpart just by directing the exchange through proxy organisations which are called "unofficial".

In this case, it might be possible for Taiwan to pledge state or party funds through the thin disguise of a non-governmental body. As Anwar Ibrahim, Malaysia's deputy prime minister and finance minister, said; China's position "does not preclude Taiwan participating on a non-governmental basis. How they do it is their own business."

Both Mahathir Mohamad, the Malaysian prime minister, and Goh Chok Tong, the Singaporean prime minister, made rare trips to Taiwan last week. Observers said that Dr Mahathir probably went there to sound out Taipei on the possibility of financial assistance – though the Malaysian prime minister denies this.

Separately, Asian finance ministers meeting in Kuala Lumpur yesterday gave their first clear explanation of how an "Asian standby facility" to disburse emergency funds would operate. The facility would be outside the "operational jurisdiction" of the International Monetary Fund. In effect this means that contributions to the standby facility would need not have to gain approval from IMF member nations.

The facility would disburse funds according to IMF conditions and only after a country had already signed up to an IMF programme of assistance. But funds channelled through the facility could be accorded looser conditions than are generally associated with IMF packages.

One top Asian official said, for example, that the facility's funds could be used to save banks from insolvency in some circumstances. Such funds would form part of a "second line of defence" and would only be used after loans from the International Monetary Fund, World Bank and Asian Development Bank – the first line of defence – were used up.

NEWS DIGEST

Japan may scrap retail store laws

The Japanese government is considering proposals to abolish a controversial law governing retail stores which has long been a symbol of Japan's closed markets. Two influential government panels are expected to recommend next week that the Large Scale Retail Store Law be scrapped in a move which could pave the way for significant changes in Japan's retailing industry.

Under the law retailers have had to obtain the approval of the local community in order to open stores over a certain size. It has long been criticised as obstructing the development of the industry and keeping foreign developers, as well as products, out of the country. Large retail stores have tended to be more willing to carry foreign products than small, traditional stores.

The law has been a constant source of friction between Japan and its trading partners, notably the US. Largely under foreign pressure, the law has been relaxed several times. *Michiyo Nakamoto, Tokyo*

■ CHINA AND TAIWAN

Beijing warns of use of force

China yesterday warned that force remained an option to recover Taiwan if it made moves towards official independence, but said it would continue to seek peaceful reunification. "We will work hard for peaceful reunification, but we will not renounce the use of force," said a foreign ministry spokesman. His comments marked Beijing's first reaction to the victory of Taiwan's Democratic Progressive party (DPP) in weekend local elections.

The DPP advocates eventual independence for Taiwan and – while it has toned down its stance on the issue, concentrating instead on local affairs – its victory over the ruling Nationalist party raised concerns of increased tensions with China. Shares in Taipei responded with a fall of more than 5 per cent on Monday. However, the main Taipei index regained ground yesterday, rising by almost 4 per cent. *John Ridding, Hong Kong*

■ PHILIPPINE ECONOMY

Growth forecasts reduced

The Philippines is lowering its growth forecasts for 1997 and 1998 following regional markets turmoil, Roberto de Ocampo, the finance secretary, said yesterday. Gross national product growth would be about 5 per cent, compared with the government's earlier forecast of 6.5 to 7.5 per cent, Mr de Ocampo said. The announcement follows publication of figures last week showing GNP growth for the first nine months had slipped from 7.3 per cent a year ago to 6 per cent.

The Philippines has been buffeted by the regional turmoil which has slashed stock market values and knocked as much as 36 per cent off the peso's value against the US dollar. Some economists believe, however, the country is likely to emerge from the Asian crisis in better shape than some of its neighbours. *Justin Marozzi, Manila*

■ VIETNAMESE CURRENCY

Bar on devaluation relaxed

Vietnam yesterday relaxed its opposition to any further devaluation of its currency, the dong. The country is facing intense pressure on its frail exports because of regional currency devaluations.

Pressure has been mounting on Hanoi to repeat a recent de facto devaluation in recent weeks, with foreign bankers saying the dong remains about 30 per cent overvalued. *Jeremy Grant, Hanoi*

Call for Asian debt market

By John Ridding in Hong Kong

Hong Kong yesterday urged the development of an Asian debt market to tackle structural financial weaknesses in the region and avoid the crises which have swept through many of its economies in recent months.

"What Asia lacks, and Europe and the US have, is a deep liquid and mature debt market," said Donald Tsang, Hong Kong's financial secretary. "We must find some ways to transform the wealth created by Asian savings into powerful liquidity."

Mr Tsang's comments, in a speech to regional finance ministers in Kuala Lumpur, echo concerns expressed by the International Monetary Fund and the World Bank, both of which have underlined the need for financial reforms and the development of long-term savings to improve stability in the region.

They come as Hong Kong is seeking to secure a leading role in developing a regional bond market. The establishment of the territory's Mortgage Corporation last month and the planned creation of a compulsory pension scheme are partly motivated by the desire to create supply and demand for long-term securities.

"We have invested our savings outside the region, mainly in OECD markets, while funds come back in the form of foreign direct investment and portfolio investment," said Mr Tsang, referring to a "maturity mismatch" in many east Asian economies.

While east Asia has more than US$800bn in foreign exchange reserves and the region has five of the six largest foreign exchange reserve holders, he added, these funds are invested overseas in long-term bonds and come back in short terms instruments. "These inflows are footloose and can reverse quite easily, as we have all learnt from bitter experience."

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Worldwide road deaths set to soar

By Nicholas Timmins in Washington

Road accidents are expected to become the third biggest cause of premature death and disability across the world by 2020, according to a report from the World Health Organisation, the World Bank and the Harvard School of Public Health.

The report, debated at an international conference in Washington yesterday, shows that, for men aged 15 to 44, road crashes are already the biggest cause of sickness and premature death worldwide.

But with the world's young adult population expected to grow sharply, and developing countries acquiring more cars, trucks and mobility, the present annual toll of at least 500,000 deaths and 15m injuries is expected to rise rapidly.

Rodney Slater, US transportation secretary, opening the conference, said: "Traffic-related injuries and deaths are growing worldwide at an alarming rate".

Deaths in the US at 42,000 a year were already rising slightly as Americans drove more.

They would jump 50 per cent by 2020 if the present safety performance did not improve. A global traffic safety effort was needed, he said, involving improved technologies and including a role for the entertainment and media industries in shaping attitudes to road safety.

The findings, which project road crashes moving from ninth place in the world league table in 1990 to third, are the result of a huge study aimed at establishing global "disease burdens", not just lost years of life but the years of disability which diseases cause.

As the impact of poor nutrition, bad water and infectious disease falls, the damage due to man-made causes is expected to rise: notably so in the case of road traffic accidents, but most spectacularly in the case of tobacco.

By 2020, tobacco is expected to kill more people and do more health damage than any single disease, including the HIV epidemic and heart disease.

As the big tobacco manufacturers switch efforts to developing countries from static or declining markets in the developed world, the share of the worldwide disease burden caused by tobacco is expected to increase more than threefold – from 2.6 per cent of all disease burden in 1990 to just under 9 per cent in 2020.

"This is a global health emergency that many governments have yet to confront," the report said.

The findings show that the burden of psychiatric illness, not only severe depressions but also schizophrenia, has been heavily underestimated. In 1990, severe depressions were the leading cause of disability worldwide.

Argentines give import to fraud crackdown

Dozens of faces are pressed against the glass partition of the customs office in Buenos Aires international airport, anxiously trying to catch the eye of seemingly unconcerned customs inspectors buried in piles of paperwork.

The hunted looks and desperate pleadings of importers' representatives in the crowded offices give only the slightest hint of corruption in this important source of government revenue. But exactly one year after authorities uncovered existence of a "parallel customs ring" which had defrauded the government of an estimated $8bn in revenues, an aggressive government push to revamp the battered institution is under way.

Among a number of new initiatives, a newly privatised customs pre-shipment inspection service went into operation last month. Over the next two years, six private sector companies, including France's Bureau Veritas and Britain's Inspectorate, will be given responsibility for verifying the value of consumer goods and cars imported into Argentina worth over $3,000.

"The Argentine customs is in crisis and it's not in a position to do the job itself," said Ernesto Resk, chairman of the pre-shipment inspection programme.

The move is expected to cost the country between $50m-$70m a year, said Mr Resk, but in return Argentina hopes to curb rampant tariff evasion, contraband and dumping.

It is estimated 30 per cent of all imports, largely from Asia, are under-billed, in some cases by as much as 1,000 per cent.

As part of the new service, the private companies will help set up a data base of international merchandise price bands to evaluate the value of imported goods.

It is estimated 30 per cent of all imports are under-billed

Currently customs officials base their evaluations on a price list from the early 1990s and subscriptions to consumer goods magazines.

Some importers are worried the new system will raise the cost of trade, delay shipments and reflect badly on Argentina.

In South America, Peru, Ecuador, Bolivia, Columbia and Paraguay have private pre-shipment inspection.

"It's like trying to kill a dove with a cannon – you get the dove but you also blow away the forest," said Fernando Passarelli, manager of the Argentine Chamber of Importers. "Instead of a private system, the best deterrent would be to put offenders in jail. Everybody says customs is the centre of corruption but there isn't one person in jail."

Soon however, some customs agents may be out of a job. A year-long investigation into the parallel customs ring by the Treasury's attorney-general has resulted in a request to remove 52 customs agents.

Another 212 customs agents are to be "sanctioned" for some 207 categories of irregularities between 1992 and 1996 as a result of the report released last month.

All told, a total of $10bn in merchandise is thought to have been brought into Argentina in the four-year period by customs officials under the guise of being "in-transit" to another country.

"The crimes detected show the presence of a mafia organisation operating principally from Ezeiza airport [Buenos Aires international airport], sheltered by a sector of the justice system which protected the contraband runners," said a second report conducted by Congress.

Under the newly combined tax bureau and customs administration, by the end of the year all trade will have to pass through a computerised registration system.

Police monitors are being installed in privately owned customs warehouses and some 30 per cent of all merchandise is now being physically inspected instead of the normal 5 per cent. Government-owned containers housing unclaimed merchandise, once randomly pilfered by customs agents, have to be cleaned out by February. As a result of the new enforcement measures, customs officials say they have been able to lower the amount of contraband goods entering the country to $100m.

Andrea Campbell

Venezuelan sell-offs gather pace with steel sale

The Venezuelan government's troubled privatisation programme is gaining momentum with the first important sale in the country's heavy industry sector, writes Raymond Colitt in Caracas. Alberto Poletto, president of the privatisation agency, said Corporación Venezolana de Guayana (CVG), the state industrial holding company, would sell Sidor, the 3m tonne steel plant, between December 17 and 19. Congress approved the sales contract last week.

Mr Poletto added the base price for Sidor, one of Latin America's last large publicly owned steel plants, would be made public next week. It is estimated to be $1.3bn-$1.5bn, and once outstanding debt has been stripped away the government hopes to net about $700m.

Seven consortia, including leading world steel producers, have qualified to bid for the 70 per cent share in Sidor. A 20 per cent stake will be offered to employees, with the remaining 10 per cent reserved for retail investors in a "public participation programme".

Mr Poletto said the Sidor sale would pave the way for the sell-off of the CVG's 700,000 tonne aluminium plant as well as a seamless steel tubes plant early next year.

The government will also sell an array of assets worth more than $100m before the end of the year. The cement company Cemento Andino, with a base price of $80m, is to be put on the block on Friday.

Fogade, the state insurance deposit fund, has fixed the sale of 100 per cent of the recently merged Banco Popular y de los Andes for December 17. Some analysts say the sale could fetch $30m-$40m, considerably above its $20m base price.

NEWS DIGEST

FDA approves beef irradiation

The Food and Drug Administration (FDA) yesterday approved the use in the US of irradiation to kill harmful bacteria such as E.coli in beef. The decision is supported by an industry that has been hit this year by several meat recalls and consumer fears about food safety.

Michael Friedman, acting FDA commissioner, said that irradiation would become a useful tool in combating food-borne illness, but that ultimate responsibility would remain with the food handler and preparer.

"We think it is safe and we think it is appropriate," Dr Friedman said of the procedure. "But the consumer should not believe that he or she does not have to use good cooking and handling techniques."

Some anti-nuclear activists have said irradiation is unsafe, but Dr Friedman said the FDA had determined that the process did not change the fundamental properties of meat and did not make it radioactive. The process would enable meat packers to kill bacteria at the end of the production line, after it was sealed and could not further be contaminated.

Although irradiation has been available for years for poultry, pork, spices and some fresh produce, interest in the process for beef intensified after the recall last summer of 25m lb of Hudson Food hamburger meat feared tainted with E.coli.

The FDA was acting on a three-year-old petition from Isomedix, a New Jersey company with long experience in medical sterilisation that wants to offer meat processors irradiation with cobalt-60 gamma rays. The meat industry had been lobbying vigorously for irradiation as an alternative to proposals by the Clinton administration for greater government authority to recall contaminated products and punish violators. *AP, Washington*

■ FRAUD ALLEGATIONS

Paraguay poll delay urged

Paraguay's government has asked the top electoral tribunal to postpone May's presidential elections for 60 days and disqualify the main presidential candidates because of alleged fraud.

Representatives of Juan Carlos Wasmosy, president, made the request to the tribunal late on Monday. Juan Carvallo, government lawyer, said the government was worried by fraud during primaries in September held by the three main parties to select candidates.

He said the government wanted the internal elections of the governing Colorado party, as well as the opposition Radical Liberal party and National Encounter, to be declared void and for new party elections to be held.

Mr Wasmosy denied opposition claims he was planning to cancel the elections and appoint the president of the Supreme Court to be his successor. *Reuters, Asuncion*

■ TOBACCO INDUSTRY

Fund set up for lawyers

The US tobacco industry has decided to set up a $500m-a-year fund to pay anti-tobacco lawyers' fees in an attempt to bypass congressional efforts to limit the amount of money lawyers make out of the proposed national tobacco settlement. It emerged yesterday the tobacco companies want the lawyers to receive "reasonable" fees to maintain their support.

The fund will be capped at $250m this year, but will rise to $500m next year and in years thereafter to meet the claims from lawyers expecting a pay-off for their role in pushing forward a national tobacco settlement. The tobacco industry has offered to pay out $368.5bn over 25 years to settle big legal claims and pay for smoking prevention measures.

Earlier this year a row broke out in Florida after it emerged that lawyers were claiming 25 per cent of the $11.3bn that the tobacco industry agreed to pay to the state to compensate it for the cost of treating smoking-related illnesses. The state, which contests the claim, is now being sued by the lawyers.

In Congress, two Republican lawmakers, with the backing of Speaker Newt Gingrich, have introduced a bill to limit the amount of money that lawyers can be paid to $150 an hour plus expenses. *Richard Tomkins, New York*

Participants warn US that failure to compromise could threaten success of the conference

Climate talks hit stumbling block

Climate change

By Bethan Hutton in Kyoto

Disagreements over the role of developing countries are proving a serious stumbling block in international climate change negotiations in Japan this week.

On the second day of the United Nations conference on global warming, there was no sign of a relaxation of the US demand for developing countries to commit themselves to limits on greenhouse gas emissions, and other participants warned failure to compromise could threaten the success of the conference.

"It is a sticking point," said Toshiaki Tanabe, Japan's ambassador for environmental affairs.

"At this stage, I do not believe we are any closer to compromise," Melinda Kimble, acting US assistant secretary of state, said. "I hope we will be able to make some progress."

EU officials yesterday offered to act as brokers between the US and developing countries, while Hiroshi Oki, Japan's environment minister, known as a skilled negotiator, chaired closed-door discussions between the US and key nations. But the state of the talks was seen as so fragile that officials refused to hint at their substance for fear of derailing the process.

"Other people are concerned about this because of the possible implications for the results of the conference," said Jorgen Henningsen, leader of the EU negotiating team. "This is one of the major problems that could prevent a positive outcome of the process."

US negotiators are bound by a Senate resolution rejecting any agreement on emission cuts by industrialised countries without a commitment from developing countries. The US demands are seen as aimed mainly at larger developing countries such as Brazil, India, and China, set to overtake the US as the world's largest emitter of greenhouse gases early the next century.

The developing countries, backed by other parties such as the EU, say the Berlin Mandate, on which the present talks are based, specifically excludes developing countries from the requirement to make new, binding commitments at this stage.

Confirmation that US Vice-President Al Gore would be attending ministerial meetings next week was given a cautious welcome. "If Mr Gore comes and says the US still will not change its position, everybody would wonder what he came to Kyoto for," said Mr Tanabe.

"Everybody supposes his participation will bring some kind of change." Mr Gore's remarks that the US was prepared to walk away from an unsatisfactory agreement worried some participants; others said his proposed one-day visit on Monday was not enough.

● Canada and New Zealand yesterday added their contributions to the suggested greenhouse gas emission targets under discussion. Canada proposed a 8 per cent cut by 2010, and a further 5 per cent by 2015, to give a total reduction from 1990 levels of 8 per cent.

New Zealand proposed a 5 per cent cut by some time after 2010. Its proposal depends on the inclusion of some "sinks" – features such as forests or agricultural practices which can absorb carbon dioxide from the atmosphere.

Global warming can threaten lives – through heatwaves, violent weather and the spread of tropical disease, international medical experts said yesterday, AP reports from Kyoto.

"Political leaders and policy-makers generally do not understand these consequences," said Eric Chivian, a Harvard University environmental health specialist. He was leading a group of doctors from the US, Russia, Brazil and Japan to the Kyoto talks.

A UN scientific network has concluded global average temperatures could rise by up to 3.5 degrees Celsius by 2100, touching off big climate disturbances, if emissions continue to increase at present rates.

The UN scientists have identified various health threats:

● Increased illnesses and deaths from heat waves, especially in urban areas and among the elderly;

● More injuries and deaths from violent storms, floods and other extreme weather;

● Greater spread of infectious diseases carried by mosquitoes including malaria and dengue fever;

● Less drinking water, because of drought, flooding and higher sea levels.

The world could not wait, Dr Chivian said. "The principle of prevention is central to medicine. If you wait for all the information to come in, it may be too late."

Harvard's Paul Epstein identified the spread of malaria as a particular peril. "Malaria is now occurring high in the mountains of central Africa and Papua New Guinea," Dr Epstein said.

El Niño may focus minds on agreeing greenhouse gas curbs

By Leyla Boulton, Environment Correspondent

It would help negotiators trying to save the world from climate change, at Kyoto this week, if they could make more of El Niño, the freak weather pattern of the year.

Contrary to some recent reports, they cannot. Scientists are so far unable to link El Niño, a natural warming of the tropical east Pacific, with man-induced climate change.

This is despite the fact El Niño is set to make 1997 the warmest year on record, according to a report by the Hadley Centre at the UK's Meteorological Office.

But El Niño can focus the minds of ministers seeking to agree international curbs on greenhouse gas emissions in one important way.

By triggering record flooding and drought across the southern hemisphere, El Niño provides a dramatic illustration of what climate change might be like.

"El Niño is the trailer to 'Climate Change' the movie," argues Tom Burke, a former adviser to governments, who now helps businesses formulate environmental policies.

Geoff Jenkins, director of the climate change prediction programme at the Hadley Centre, makes the same point. He says that while the "jury is still out" on a direct link between the two, El Niño can be used as "an analog for a warmer world".

"It shows how vulnerable we are to even small changes in temperature," says Mr Jenkins. "If you are going to perturb weather further with man-induced climate change, it's going to have a further negative impact".

The Intergovernmental Panel on Climate Change (IPCC) reckons that if emissions of carbon dioxide, the main greenhouse gas, are allowed to double, average temperatures could rise by up to 3.5 degrees Celsius by 2100.

Those averages say nothing of the greater extremes to be expected in specific areas. The IPCC has suggested that projected temperature and sea-level rises could be half as great if emissions in the atmosphere, currently at 360ppmv (parts per million by volume), are capped at 450ppmv by 2100.

By comparison, El Niño helped boost the earth's average surface air temperature in 1997 by 0.43 deg C.

It has heightened anxiety about the weather, particularly in the developing world, which has borne the brunt of the devastation so far.

Rob Allen, a visiting climate expert at the Hadley Centre, says the present El Niño is likely to break up in spring 1998. But the effects of further rainfall were likely to be more severe following soil dislocation caused by drought.

It will be with one eye on El Niño that developing countries will be pressing industrialised countries at Kyoto to take a lead in cutting greenhouse gas emissions.

But already, many are being forced by El Niño into anticipating the weather and trying to mitigate its effects.

"Previously, we waited for the weather to fail," says Dusan Zukpa, head of the United Nations Latin American and Caribbean Disaster Mitigation Unit. "But now non-governmental organisations and countries are coming to terms with the idea you can anticipate the weather."

Many countries were "developing a culture of prevention" which could lessen if not avoid the effects of torrential flooding.

A summary prepared by the UN says Peru, Bolivia, Ecuador, Nicaragua, Honduras and Papua New Guinea have all declared national states of emergency to cope with either flooding or drought.

Heavy rain in Argentina has delayed the planting of wheat, while flooding has affected most crops in Venezuela.

Some 3m people face extreme food shortages in Tanzania after the country suffered a near nationwide crop failure caused by drought. Drought in Ethiopia could threaten the food supplies of 4m-5m people in the coming months.

Governments have imposed food export bans in Zambia, Kenya, Malawi, Zimbabwe and Uganda, either in the wake of excessive rain or drought. In Asia, China has been hit by its worst drought in 20 years; Indonesia is suffering its worst in half a century, aggravated by slash-and-burn policies which have spread a haze over five neighbouring countries.

Heavy rains in Pakistan are likely to be followed by flooding and a 40 per cent cut in its wheat harvest. Flooding has affected 100,000 people in Bangladesh.

A protracted drought, the worst in 40 years, hit the northern Caribbean in the first seven months of this year. It was particularly damaging in Jamaica, Haiti, the Dominican Republic and Puerto Rico. The drought in Jamaica, for instance, led to higher food prices and water rationing.

But an important worry scientists have about man-induced climate change is that its precise effects are even less predictable.

"Man has never embarked on this kind of experiment with climate before," says Matthew Spencer, a campaigner for Greenpeace, the environmentalist pressure group.

Additional reporting by Canute James.

This is the second in a series of articles on issues related to climate change negotiations at the Kyoto conference.

Blame El Niño: a fisherman holds two hammerhead sharks which were attracted to the unusually warm water off Peru's coast. Hammerheads are rarely found in this region AP

NEWS DIGEST

Rates decline 'not justified'

The sharp decline in interest rates paid by emerging market borrowers over the last two years went far beyond what would be justified by the improvement in their economic conditions, according to a new study from the Institute of International Finance.

The study suggests investors were carried away by the investment climate into paying less attention to the inherent risks of their investments.

The IIF, a Washington-based grouping of international banks and fund managers, found that 11 large emerging market borrowers were paying an average of 3.15 percentage points more than US Treasury securities in late 1995. But by September this year, that spread had narrowed to 1.18 percentage points, before widening again to almost 2.5 percentage points at the end of October after the currency turmoil in south-east Asia. William Cline, IIF's chief economist, said: "Although there were improvements in economic performance, high global liquidity and competition in these markets has led many investors to accept disproportionate reductions in returns on emerging market bonds." The IIF said the rebound in spreads in late October might have represented a correction, bringing spreads back from unsustainable levels. *George Graham, Banking Editor, London*

■ LEBANON

New Israeli withdrawal lobby

The campaign for an Israeli unilateral withdrawal from Lebanon was stepped up yesterday after a group of senior opposition Labour politicians established The Movement for a Peaceful Departure from Lebanon.

Yossi Beilin, one of the founders, said the movement attracted support from across the political spectrum as public opinion increasingly questioned Israel's role in south Lebanon and the army's ability to continue sustaining casualties. The Movement proposed redeploying along the international borders in accordance with the March 1978 United Nations Security Council Resolution 425 which called on Israel to withdraw from all Lebanese territory. It would have six months to do so.

In the meantime, Israel would erect an electronic fence, minefields, patrols and military outposts to protect its borders. *Judy Dempsey, Jerusalem*

■ SOUTH AFRICAN BUDGET

Promise of more transparency

The South African government has spelled out the tough budget choices it faces over the next three years as part of what Trevor Manuel, the finance minister, described as "an exercise in transparency not found elsewhere in the world". He said yesterday that for too long budgets have been made behind closed doors. "Every citizen will now be able to see what we are trying to achieve and the resources we have available," he said.

Mr Manuel said the March 11 budget would for the first time outline government spending plans for three years ahead, although MPs would only vote on allocations for the next 12 months. The document offers a more sombre economic assessment than earlier government policy statements. Growth this year is forecast at just 2 per cent, rising more slowly than previously expected to reach 5 per cent in 2000. *Roger Matthews, Johannesburg*

■ ZAMBIAN POLITICS

Chiluba orchestrates reshuffle

Frederick Chiluba, Zambia's president, yesterday demoted his vice-president and defence minister only five weeks after a failed coup by disgruntled soldiers.

Mr Chiluba said he had also retired the commander of the Zambian Air Force and moved the country's army commander into the foreign service. "I have shaken the basket upside down so that we can move forward with a bit more zeal. I want us to effectively respond to the challenges which confront us today."

He replaced Godfrey Miyanda, vice-president, with Christon Tembo, the present mines minister and Ben Mwila, defence minister, with Chitalu Sampa, the home affairs minister. *Reuters, Lusaka*

Mugabe set for party triumph over land seizure plan

By Tony Hawkins in Harare

President Robert Mugabe is expected to receive a hero's welcome in response to his land acquisition programme when the congress of the ruling Zanu-PF party opens today in the eastern border city of Mutare.

Although Zimbabwe's financial markets are prepared for continuing economic turbulence in the wake of Friday's announcement of plans to seize 1,503 mostly white-owned farms, congress delegates are certain to endorse Mr Mugabe's move.

Most of the farmers threatened with land confiscation, which could get under way as early as next August, are reported to be preparing to appeal against the compulsory acquisition order and the stage is now set for protracted legal battles over both the principle of acquisition and the compensation government offers.

Businessmen and investors will be expecting Mr Mugabe to give details of the timetable for acquiring the land, what kind of compensation it will pay and how this will be financed.

But at a news conference on Monday by Kumbirai Kangai, agriculture minister, there was little evidence of an agreed strategy covering the next stage of the resettlement programme.

Farmers would be allowed to reap already planted crops, he said, but the first group of farmers to be dispossessed would be forced to leave their land by next August. He revealed a new criterion for land acquisition, saying that productive enterprises would be taken over where this was justified by the need to achieve a more equitable racial balance of land ownership.

The minister could not say how the government would pay for the land at a time of mounting economic difficulties, including a backbench revolt by members of parliament which blocked government plans to increase taxes on income and profits.

At the weekend the Zimbabwe Congress of Trade Unions repeated its threat to call a national strike to protest against the planned increase in taxes. In the meantime, the finance ministry has ignored parliamentary opposition to the planned 2.5 per cent rise in the sales tax rate to 17.5 per cent, and higher taxes on electricity and fuel, and gazetted the new taxes.

The government will seek approval for both a 5 per cent surcharge on income and company taxes and higher sales and fuel taxes when parliament resumes next week. In the meantime, official efforts to borrow in the money market have been frustrated by rising interest rates, with the call money rate at 32 per cent yesterday.

The government needs to raise an estimated Z\$2.5bn (\$172m) within the next fortnight to finance a gratuity payment of Z\$50,000 (\$3,440) each to some 50,000 war veterans.

Dealers say the central bank will either have to lend to the government on overdraft, reduce the 20 per cent statutory reserve held by banks to increase money market liquidity, or raise the rediscount rate for the second time in three weeks.

Economists say higher interest rates will further raise the budget deficit from a revised 8 per cent of GDP to between 9 and 10 per cent. The Zimbabwe dollar, which on a trade-weighted basis has fallen 21 per cent this year and 10 per cent in November, is likely to come under pressure.

Economists are predicting very little GDP growth next year (2 to 3 per cent at best) and a fall of as much as 10 per cent in GDP if the land takeover is implemented as quickly as government supporters appear to expect.

Congo gunfire puts pressure on donors

Nothing could be better calculated to concentrate the minds of those at a Congo donors' conference today than the exchange of fire between army factions last week in the worst outbreak of violence since President Laurent Kabila's takeover.

"It's a reminder of how fragile Kabila's government is," said a diplomat. "The international community has to decide whether it is going to help or stand back and face the consequences of possible collapse."

Until last week, the issue threatening to undermine the "Friends of Congo" meeting in Brussels – at which Kinshasa hopes to reach an understanding with donors and start discussing rescheduling its \$14bn debt – was the government's obstruction of a United Nations mission investigating massacres of Rwandan refugees.

In reports coinciding with the conference, Amnesty International denounced the "sustained policy of atrocities" it believes investigators will uncover, while Human Rights Watch urged donors not to repeat the mistake of funding a repressive government. But Friday's clash, which followed the army chief of staff's arrest on suspicion of coup-plotting, highlighted the fear that may persuade donors to skim over the presumed crimes of the Alliance of Democratic Forces for the Liberation of Congo (AFDL).

After six months, the government's hold on power remains tentative. That has worrying implications for a region with such fragile states as Angola, Congo-Brazzaville, Burundi, Rwanda and the Central African Republic.

The World Bank, which has invited 30 countries, the International Monetary Fund, the European Union and the UN to Brussels, makes its position clear. "The point is, do we want to see the potential instability of this sub-region spread?" asks an official.

Haunting the bank is the west's part in funding the late President Mobutu Sese Seko long after his credibility had waned. For bank officials, this meeting represents an opportunity to make amends and pre-empt anarchy. Many agree. The US, UK, South Africa and much of the EU favour muscular engagement. Against them is France, which sees Mr Kabila as the latest belligerent Anglophile leader snatching power illegitimately. The outcome will depend on how convincing a case Kinshasa makes when it presents its three-year reconstruction plan.

Politically, it is on shaky ground. The four-party alliance formed last year has shallow roots. A ban on political activity remains, opposition party members who defy it are arrested, and Mr Kabila's plan for a return to multi-party democracy is behind schedule.

Despite attempts to widen the cabinet to include the Union for Democracy and Social Progress (UDPS), the AFDL has failed to co-opt mainstream opposition, which sees the movement as a new form of dictatorship.

Most striking is the failure to establish any rapport with a public accustomed to Mr Mobutu's crowd-pulling charisma and resentment at the continuing presence of Rwandan, Angolan and other foreign officers who form the core of the AFDL military machine.

Weary of a democratic process that Mr Mobutu spun out for seven years, most Congolese are surprisingly willing to waive their rights as long as they see progress on the economic front. Here, the government's record is more encouraging. By halting the wild printing of money used to bridge budget deficits, the AFDL has caused an unprecedented appreciation in the currency, the zaire, and brought hyper-inflation under control.

For ordinary Congolese such changes do not go unnoticed. But they have been accompanied by an alarming slowdown in economic activity, the result of the government's drive to improve tax collection and its refusal to spend its way out of recession.

Despite agreements signed with South African, Canadian and US companies, investment in the mining sector has yet to start, undermining ministerial hopes that private sector interest could alone fuel a recovery.

The government's decision to renegotiate several memorandums of understanding with these companies has not helped. Nor have conflicting signals from a cabinet torn between anti-western rhetoric reminiscent of Patrice Lumumba, Congo's late socialist premier, and free market pragmatism.

"One minister says one thing and another says the opposite. No one knows who has real influence," says a banker. "While that situation continues, businessmen will watch and wait."

As the private sector hesitates, risks of implosion grow. Mr Mobutu left a 600,000-strong civil service, embittered by years of salary arrears, desperate to see living standards improve. "If you can give schools and hospitals to the people you can get away with a lack of popular support," says an executive.

"But if you don't improve living standards and you don't let people speak, it gets dangerous."

Mwana Nanga Mawapanga, the finance minister, acknowledges the problem. "Right now, we need to get some economic activity going... But where is the money to come from?"

Unless signs of recovery grow, opponents of the AFDL say a "second liberation" is possible. Diplomats warn that the government, teetering on the edge of a cabinet reshuffle, stands at an ideological turning-point.

Brussels may decide which path it takes. Organisers insist the meeting is not a pledging session, but a warm welcome and the launch of some high-profile reconstruction projects would buy the government time until private investment dribbles in. A cold shoulder would probably mean the triumph of the AFDL's go-it-alone faction and the dangerous turning in on itself of central Africa's largest nation.

Editorial comment, Page 15

Michela Wrong

Hong Kong terminal operators braced for business shake-up

Latest shipping alliance could spark rethink on facilities. Louise Lucas reports

Terminal operators in Hong Kong, the world's busiest port, are bracing themselves for a shake-up after the creation of a new shipping alliance this week.

Members of alliances usually utilise the same container terminals to co-ordinate route schedules and frequencies. The recent wave of mergers and takeovers within the shipping industry has already prompted a switch in container terminal allegiances, with Modern Terminals (MTL) emerging the net winner.

Along with the bigger Hongkong International Terminals, MTL dominates the container terminal industry in Hong Kong. HIT, the ports arm of Hong Kong conglomerate Hutchison Whampoa and the world's biggest privately owned container facility, is estimated to have a throughput of around 4m TEUs (20ft equivalent units) at Hong Kong's Kwai Chung port, or a 54 per cent market share. This is roughly double the throughput at MTL berths.

But HIT is expected to be the biggest loser from the industry consolidation and the new alliance which could cost it one of its biggest customers, OOCL. OOCL, part of the Orient Overseas International (OOIL) shipping company controlled by the family of Tung Chee-hwa, Hong Kong's leader, could be forced to switch its allegiance to MTL in line with the other members of the new grand alliance.

The global alliance of which OOCL was a member (along with American President Line, Mitsui OSK Line and Malaysia International Shipping Corporation) was a customer of HIT. Last year the alliance's estimated annual Hong Kong throughput was 1.3m TEUs, just under 29 per cent of HIT's throughput.

The re-jigged grand alliance which OOCL joins, along with MISC, uses the facilities of MTL in Hong Kong, where it is estimated to have accounted for 660,000 TEUs last year or about a third of MTL's total throughput.

Following the realignment, MTL expects to win the OOCL business giving it an estimated additional 500,000 TEUs a year – boosting its own throughput by a quarter and reducing HIT's by one-eighth.

ING Barings reckons that while the 40 per cent of OOCL's shipping capacity which is deployed on the direct trans-Pacific route will stay with HIT, as will the Far East/Central America/East Coast of North America route, the balance could shift to MTL.

That means around half OOCL's 715,000 TEUs moving to MTL, where a further attraction would be the terminal operator's lower handling charges.

However, even that is not an automatic assumption. Analysts argue that the net result of the redrawn alliances, compounding the mergers within the shipping industry, could spark a rethink on facilities and start a new round of bidding.

Under this scenario, HIT might have an edge. "Given HIT's competitive advantage of having the flexibility to offer a packaged deal with its other ports and its having more berths than MTL, we believe that HIT should stand a better chance of winning more new business," said Merrill Lynch.

Either way, just as the shipping alliances give their members more marketing clout, so the new order calls for big, flexible and multi-berthed container terminal operators.

Small operators, unable to offer contiguous berths that can be used simultaneously and mega facilities, could see their days numbered.

One shipping executive said the birth of new alliances also highlights what he refers to as illogical industrial policy by the Hong Kong government which – in a stated bid to widen competition – awarded the contract to develop and operate the latest terminal (CT9) to a consortium composed mainly of newcomers.

That decision in 1992 came under fire from all quarters. China attacked the inclusion of Jardine Matheson, claiming it was a sweetheart deal in return for the UK-controlled conglomerate's support for democratic reforms introduced by Chris Patten, then governor of Hong Kong.

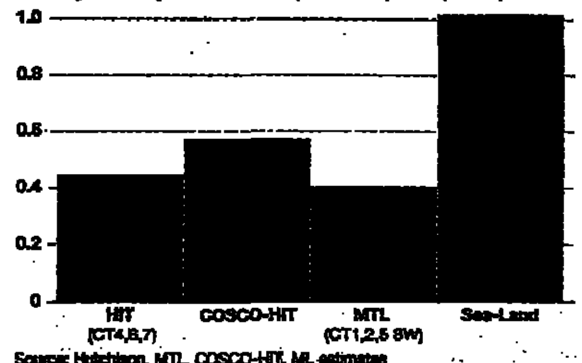
Beijing refused to ratify the contract and development of the port was stalled as a solution was thrashed out. A compromise was reached in September last year, which saw Jardine reduce its role from a consortium leader as well as a reshuffling of facilities among operators.

The controversial consortium, now named Asia Container Terminals and led by Sea-Land, will be closely watching the shifting allegiances between shippers and terminal operators.

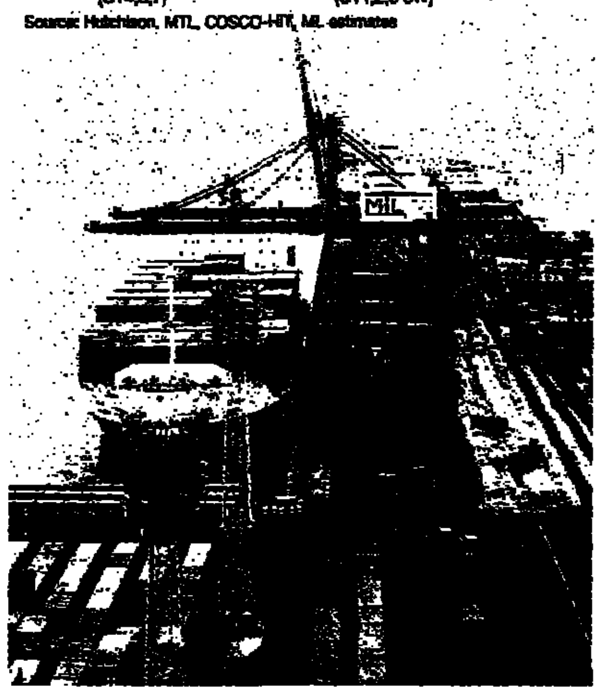
In a world where port charges have been driven lower, and all terminals are vastly under-utilised (to the extent of 30 per cent in MTL's case), the prospect of a new round of bidding is both tantalising and – given the big alliance's clout for driving bargains – somewhat nerve-racking.

Hong Kong: who handles what

Twenty foot equivalent units per berth, 1996 (million)



Source: Hutchison, MTL, COSCO-HIT, ML estimates



China confirms tariff exemption

By James Harding in Shanghai

China yesterday confirmed that it would extend tariff exemptions on capital goods imports for some foreign-funded businesses, a measure intended to encourage flagging foreign investment.

The State Council, China's cabinet, has decided to allow duty-free imports on capital goods and equipment for foreign-funded projects approved before March 31 last year, according to a statement issued by the ministry of foreign trade.

The exemptions will cover imports of equipment and materials considered part of an enterprise's investment, according to the statement quoted by Xinhua, the official news agency.

The Chinese government cancelled the system of tariff exemptions from April last year, prompting strong opposition from foreign businesses in China which has faced as much as 40 per cent increases in the cost of importing machinery and equipment.

The grace period for foreign-funded projects valued at less than $30m was to lapse at the end of this year and projects worth more than $30m were to receive the special treatment until the end of 1998.

Contracted foreign investment fell 38.8 per cent in the first nine months of 1997 to $34.92bn, while actual foreign investment has grown, but at a slower pace than last year.

In the same period from January to September, a total of 15,067 foreign investment projects were approved, down 19.9 per cent compared with the year-ago period.

Senior government officials have said recently that the government would re-introduce the tax breaks for foreign companies importing capital goods into China, giving particular emphasis to high technology businesses.

Philippines sell-off setback

By Justin Marozzi in Manila

Privatisation of the Subic Bay container terminal in the Philippines faced fresh uncertainty yesterday after a previous bidder launched court action to stop the rebidding due on Friday.

According to court documents, Hutchison Ports Philippines, the local subsidiary of Hong Kong's Hutchison Whampoa, asked the Supreme Court to intervene days before the results of the controversial tender were due to be announced.

Hutchison already has a case pending in the Olongapo city court near Subic demanding the government award it the contract.

Subic Bay authorities decided to award the contract – estimated to be worth $50m-$200m – to Hutchison last year but were later overruled by President Fidel Ramos.

Mr Ramos asserted the terms of reference in the tender documents had been disregarded, and ordered a rebidding.

Observers said Hutchison's latest move in taking its complaint to the highest court in the country could have implications for the privatisation.

"The judiciary's powers of review under the 1987 constitution are so broad and ill-defined that anything can happen," said Alex Magno, a Philippines professor of politics and a long-standing critic of the judiciary's interventions in economic and commercial matters.

The worry now is that, whichever of the two companies involved in the tender – Royal Port Services and International Container Terminal Services – is announced as the winner on Friday, the Supreme Court may yet overturn that decision.

A successful privatisation after prolonged difficulties would send a strong signal that the Philippines is able to hold efficient and transparent tenders.

Prof Magno said it was possible the court might issue a temporary restraining order preventing any decision being announced on Friday, following Hutchison's petition. The case might hinge on an abuse of authority by the president, he added.

The Supreme Court has come under intense fire following its decision last month to scrap the law deregulating the oil industry.

Earlier this year, the court was fiercely criticised for overturning the award of a contract to privatise the Manila Hotel and awarding it to a local company which had bid less than the foreign rival.

Key talks on DVD Audio

By Alice Rawsthorn in London

Senior record executives will meet in New York next week to assess proposed technologies for DVD Audio, the advanced digital disc that the music industry hopes will become the next generation of audio format.

The development of DVD Audio coincides with a static global music market. This follows a decade of healthy growth when the compact disc emerged as the prime audio format and record sales were buoyed by consumers buying CD versions of old albums as well as new releases.

Record companies are anxious to orchestrate a smooth, successful launch for DVD Audio, which will relay video images as well as creating highly sophisticated sound, in the hope that it will become a popular new format and revitalise the market.

Initially, the music industry hoped to ensure that record companies and electronics manufacturers would adopt a standard version of DVD Audio hardware and software, thereby avoiding a repetition of the damaging "format war" between VHS and Betamax that impeded the launch of the video cassette.

The International Federation of the Phonographic Industry (IFPI), the London-based body which represents record companies, formed an International Steering Committee (ISC) of senior executives to oversee development of DVD Audio technology.

Two competing sets of technical specifications for DVD Audio have since emerged. One was devised by Sony and Philips, the Japanese and Dutch groups, which jointly developed the audio-CD. The rival format comes from DVD Forum, a consortium including Toshiba of Japan and Time Warner, the US media concern.

The ISC announced last month it could not decide between the two rival formats, and suggested that all DVD Audio hardware should be capable of playing both versions of the disc.

At the New York meeting on Friday next week, specialist electronics manufacturers, such as Dolby and Digital Theatre Systems, will present various technologies that could be incorporated in the final version of DVD Audio. The IFPI hopes to complete technical development by mid-1998, according to Paul Jessop, director of technology. If all goes according to plan, he said, DVD Audio hardware and software could go into commercial production from late 1998.

Proposed Brussels deal offers further exemption from ban in return for phased decline in sponsorship

Formula One is urged to curb tobacco links

By Michael Smith in Brussels and John Kampfner in London

Formula One motor racing will be obliged to show that it is cutting tobacco sponsorship each year to preserve any exemption from a European Union ban.

A latest draft directive for a ban, circulating among member states in Brussels yesterday, coincided with confirmation by the UK government that it had dropped its insistence on a permanent exemption for motor racing.

The draft says the European commission will have to submit to the European parliament a report on implementation of the directive every two years – a clause the British believe could enable the exemption to be extended if required. But the draft has blank spaces for the timescale, leaving final details for ministers.

Tessa Jowell, public health minister, told MPs the revised draft was a "good building block" for a deal to be struck at a meeting of the EU social affairs council tomorrow.

Under the proposal drawn up by Luxembourg, which holds the rotating EU presidency, the directive would take a specific number of months to come into force. All sports would be given a two-year derogation, followed by a further exemption "in exceptional cases and for duly justified reasons" for "existing sponsorship of events or activities organised at a world level".

UK and EU officials have said the exemption could be set around three years, leaving an initial deferral for Formula One of a minimum of six years.

According to the text, the exemption would be maintained provided that "the sums devoted to such sponsorship decrease during the transitional period" and "voluntary restraint measures are introduced in order to reduce the visibility of advertising at the events concerned."

Ms Jowell's third appearance before a Commons committee in as many weeks was made easier by the prospect of an EU agreement. "The latest text is an indication that the strong stance taken by the UK government is beginning to bear fruit," she said.

Asked why Formula One should be considered exceptional, Ms Jowell said it was the "scale of its global operation" and the amount of money poured into it by tobacco companies.

Ms Jowell acknowledged "moral flaws" in the EU's pursuit of a sponsorship ban and its continued annual subsidy of around Ecus 950,000 for tobacco growers in southern Europe.

She told the all-party European standing committee that Formula One received about £150m a year from tobacco, 50 per cent of its revenue. This compares with 70 per cent for snooker.

Share trading system faces fresh criticism

George Graham reports on a recent lack of liquidity

After another bout of unusual volatility last week, the London Stock Exchange's new electronic share trading system is again being criticised.

Two traders at J.P. Morgan, the US investment bank, were suspended on Monday during an investigation into charges that they attempted to manipulate the FTSE 100 index in the closing minutes of London trading on Friday. But some fund managers blame the whole Sets electronic order book, launched six weeks ago, for recent volatility.

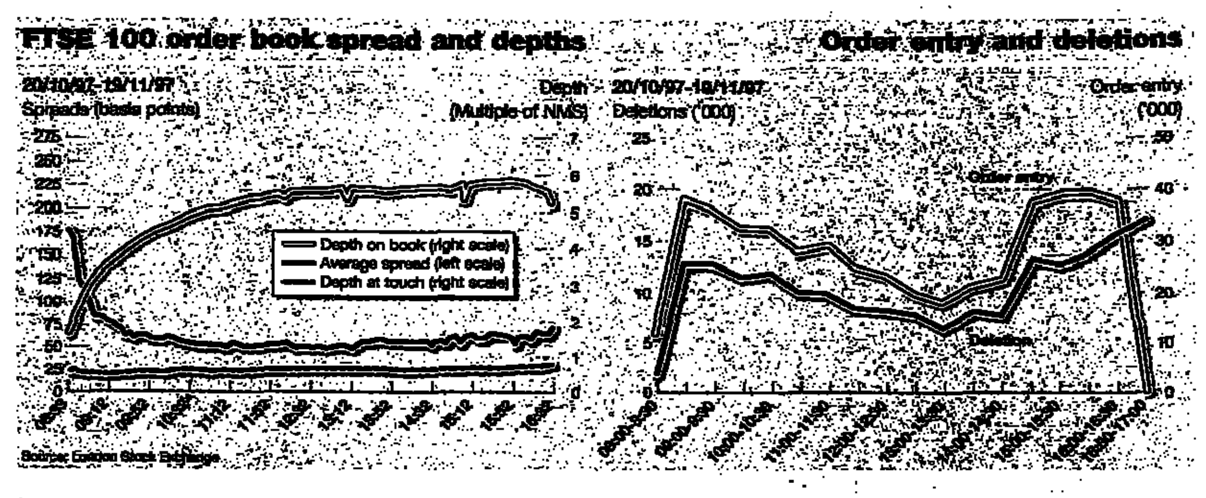
"At the moment, investors appear to be guinea pigs in a long drawn out experiment; the time for experiment is over," complained David Grenier, chief executive of Independent Investment Management. The new system is suffering from a lack of liquidity, especially at the beginning and end of the day.

The order book is handling an average of 36 per cent of trades. But few institutional orders are being entered before trading begins at 08h30 London time, and for the following hour or so the spread between the best buying and selling prices on offer is very wide.

From about 09h30 onwards, spreads are falling sharply as more orders come into the system, and are now averaging around 50 basis points – less than under the old system, in which marketmakers displayed prices at which they were willing to buy and sell. The exchange has been favourably surprised by the depth of orders on the new system. The total volume of orders in each stock averages more than five times Normal Market Size – a measure of a normal institutional bargain published by the stock exchange for each share and roughly equivalent to 2.5 per cent of daily trading volume.

At the "touch" – the best buying and selling prices on display – the average depth is just under one NMS, which dealers regard as satisfactory.

But after 16h00, and especially after 16h10 when the traded options market closes, many investors are deleting their orders from the system. That can leave the order book with much less depth and with much wider spreads between buying and selling prices.



The question is whether the lack of liquidity represents some fundamental flaw in the system, or whether it is just a transitional problem because traders and investors are not yet used to the system. "The complainers are the people who wish they had been in there buying cheap or selling expensive," said one senior London equity trader.

Several traders suggest that the market hours could be reduced – if trading lasted from 09h00 to 16h00 instead of 08h30 to 16h30, London would still be open for longer than New York.

Many also believe the functioning of the order book would be improved if the exchange set up a central counterparty. This would allow brokers to trade anonymously – currently identities are revealed to the person who fills their order – and would reduce settlement costs. But going back to the old marketmaking system is not an option. Most marketmakers are thrilled to be relieved of the obligation to offer buying and selling prices to all comers, including competitors.

Alan Line, chief dealer at Foreign & Colonial, the fund manager, said the arrival of the order book had shown how much of the liquidity in the old system came from the marketmakers. "The liquidity in the market before was illusory, and now we are talking about real liquidity."

Heads of dealing desks are now telling their traders to keep competitive orders on the system at the end of the day to take advantage of occasional wide spreads. As more do so, those spreads are likely to narrow, making it harder for a handful of trades to move the market sharply up or down as happened on Friday.

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Central bank opens books on forex and gold reserves

By Robert Chote, Economics Editor

The Treasury and the Bank of England, the UK central bank, yesterday opened the books on the Britain's reserves of gold and foreign exchange, revealing that the government has more in its war chest than earlier figures suggested.

The plan to publish these figures was announced by Gordon Brown, the chancellor of the exchequer, at September's International Monetary Fund annual meeting in Hong Kong.

The first quarterly report on the reserves confirmed yesterday that the UK government had gold and foreign exchange worth \$41.015bn in its "exchange equalisation account" at the end of September. But yesterday's report revealed that, in addition, it had \$1.240bn in forward holdings – currency which other holders have an obligation to sell to the government in the future.

This meant that the total assets in the exchange equalisation account totalled \$42.255bn, up from \$41.838bn at the end of June.

The report also detailed the composition of these assets for the first time. They included \$20.5bn in European Union currencies, \$11.4bn in US dollars, \$1.5bn in Japanese yen and \$222m in other currencies.

In addition to holdings of foreign exchange, the account also included \$6bn of gold, \$2.3bn in effect on deposit with the IMF and \$399m in "special drawing rights", the IMF's currency.

The report also included details of the Bank of England's holdings of gold and foreign exchange. These are deposits placed with the Bank by overseas central banks and other customers in the course of their normal banking relationship with the Bank.

The Bank's assets include \$658m in US dollars, \$137m in EU currencies and \$1m in other foreign exchange. The Bank also holds \$1.2bn in gold, which it lends on behalf of the owners.

But this figure understates the amount of gold which the Bank holds in its vaults. Gold for which the Bank acts simply as a custodian does not enter the Bank's balance sheet.

French minister warns on 'euro club'

By David Wighton, Political Correspondent

Britain yesterday received a blunt warning that other EU countries would ignore its objections to the Franco-German "euro club" for countries entering the single currency in 1999.

Dominique Strauss-Kahn, the French finance minister, said the core countries were no longer looking for a compromise. "We tried to explain to them that we were ready to inform them and include them but they didn't like that, so we just won't inform them and that's it."

The unusually frank comments, made during a break in a Franco-Spanish summit, followed Monday night's meeting in Brussels in which the UK was rebuffed in its campaign to join the euro-club.

The UK government yesterday warned that Britain's European partners "would have to take the issue seriously" and stressed no decision had been taken at Monday's meeting. "If there had been a decision yesterday that would have been a problem," the prime minister's official spokesman said.

But the government appeared to be downplaying its call for UK membership of the so-called euro-x committee in favour of stressing the primacy of the council of all EU finance ministers.

"Ecofin has got to remain the main decision-making body on economic and financial issues. The Treaty [of Rome] clearly states that these are matters of common interest," said the official spokesman.

The leader of the European Parliament's socialist group – Pauline Green, of the UK Labour party – yesterday backed the government's call for all economic decisions surrounding the single currency to be handled by Ecofin.

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ponsorship links

French minister warns on 'euro club'

erves

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Report says only 49% of continent's top managers recognise implications of 2000 problem

Europe is given systems 'bomb' warning

By Paul Taylor in London

Only 55 per cent of UK companies are fully aware of the implications of the "millennium bomb" and the figure is even lower in mainland Europe, a report prepared by the PA Consulting Group said yesterday. It was based on responses from 1,000 organisations in 15 countries.

The survey said senior managers in the US showed highest awareness of the problem – which arises from the inability of older computer systems to cope with the date change at the turn of the century – with 71 per cent perceived to be aware. Levels were 54 per cent in Asia and 49 per cent in mainland Europe.

"This lack of awareness on the continent may be due to a greater emphasis being placed on the pressures to achieve economic and monetary union," the report said.

Gary Miles, a member of PA's management group, said: "Organisations must recognise the magnitude of this problem.

"To solve it requires extensive project management experience, and financial and human resource. Our experiences indicate that organisations who are tackling the problem are constantly finding that it is far more complex than originally thought.

"PA urges all organisations to act now."

The report warned that severe disruption to business was likely, despite a high awareness of the issue among information technology professionals.

"Incorrect data processing could be catastrophic for businesses unable to process orders, despatch invoices, calculate payments, process transactions and so on," it added.

Given that 68 per cent of organisations expect to be affected before 2000 – and more than half expect to feel the impact in 1998 – PA says it is of particular concern that so many organisations have failed to take any formal action.

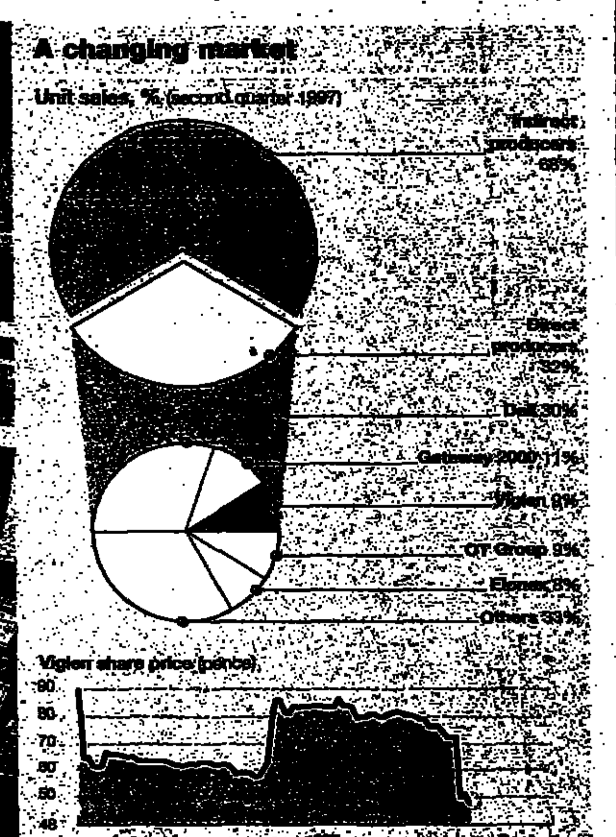
Barbara Roche, an industry minister, said the report, "adds to the growing body of evidence that a clear threat exists to both computer systems and business continuity resulting from the millennium date change".

The survey's other findings include:

- Only 56 per cent of organisations have a formal year 2000 programme in place;
- Forty-four per cent of the planned resources needed to fix year 2000 problems are expected to be obtained externally;
- Organisations are planning to spend an average $6.91m to resolve their millennium problems;
- Smaller organisations are behind in understanding the likely implications of the problem;
- Forty-four per cent of organisations have not included so-called embedded systems – electronic chips which control equipment such as lifts – in audits;
- Almost a third are unable to estimate the cost of their millennium programme. The cost to organisations which did provide estimates was $4.7bn.

PC suppliers bugged by sluggish revenues

'Industry must lift volumes by 20% just to stand still'



A buoyant personal computer market is expected in the UK this Christmas – but the rush of orders is unlikely to bring much festive cheer to the PC industry.

Despite rising sales, helped by the growing popularity of the internet and computer games, falling prices have meant revenues for many PC companies are at best increasing only slowly. In the past year alone, PC prices have declined 20 per cent.

"It means the industry has to increase volumes by a fifth just to stand still," says Bordan Tkachuk, managing director of Viglen, the UK's third biggest direct PC supplier, which issued a profits warning last Friday.

Viglen's results, announced last month, showed flat annual profits and a 5 per cent dip in turnover.

Last week, RM, which supplies IT systems to the education market, said its annual PC revenues increased just 4 per cent.

Falling prices are being fed by three factors: lower component costs, low entry costs for suppliers and the increasing sophistication of the computer buyer.

PC producers with the strongest brands have withstood the volatile market conditions the best. "Indirect" producers such as Compaq, IBM and Toshiba dominate that part of the PC market which supplies resellers – large wholesalers to industry and markets, such as education – and retailers.

They also tend to have greater ownership over the technology used in their machines – and thus more scope for margin improvement. Indirect accounts for two-thirds of the 2.5m PCs sold in the UK last year.

The remainder is made up of direct suppliers – companies which largely assemble their machines from components imported from abroad before being branded.

The ease of access to PC components, particularly from south-east Asia, has led to a proliferation of direct suppliers. The downward pressure on prices has led to a shake-out in the sector, with the number of suppliers falling 40 per cent in the past two years, according to Romtec, the industry research group.

The decline in smaller suppliers has bolstered the position of the "big five" in the direct market. Dell, Gateway 2000, Viglen, OT Group and Elonex now account for almost 70 per cent of the direct market, against 50 per cent three years ago.

"Consolidation will continue as prices continue under pressure," predicts Mr Tkachuk.

It is not just the surfeit of suppliers which is affecting PC prices. Component costs are also declining. Intel, which supplies microchips to around three-quarters of the world's PCs, has been fighting an aggressive battle for market share. This has led to a decline in chip prices in the past two years.

Other components have also been coming down in price. The result has been higher specifications on models for the same retail price.

A further development has been the growing sophistication of the computer buyer. This year, for the first time, second-time buyers of PCs – who tend to be looking for higher specification at a lower price – are in the majority. These are typically direct buyers, adding to the belief among industry analysts that the direct sector will remain the fastest-growing.

The difficult market conditions have prompted the first moves by suppliers in both the direct and indirect markets to search for better margins and higher sales. Viglen, for example, has launched its first indirect model, co-branded with Microsoft.

"We need to appeal to the first-time buyers so that when they move on to their second PC, we will be their choice," says Mr Tkachuk.

At the same time, some of the indirect suppliers have begun to eye the direct market. In particular, the growing use of the internet to sell PCs is attracting much attention.

However, few are likely to commit resources to a market which requires the setting up of comprehensive support and distribution services. In addition, indirect producers would risk upsetting their agreements with their existing channels of support and supply.

Compaq, for example, has opened a call centre in Glasgow, but uses its existing resellers to fulfil the orders. "We recognise the market for people ordering direct, but believe the main market is corporate," says Joe McNally, head of Compaq UK.

Christopher Price

Some accounts to be scrapped in savings reform

By Jean Eaglesham and David Wighton

Thousands to lose tax relief

The 6.5m people who hold personal equity plans (Peps) and tax-exempt savings accounts (Tessas) face a period of upheaval when the successor account is introduced in April 1999, Jean Eaglesham writes. As many as 975,000 of them will not only lose tax relief on some of their savings but in effect be barred from tax breaks on new savings. The new account will also hit thousands relying on Peps to repay mortgages. Between 10 and 15 per cent of Pep and Tessa savers have more than £50,000 held in the accounts. Many argue that the £50,000 ceiling is retrospective taxation.

Proposals for the new individual savings account, the successor to personal equity plans and tax-exempt special savings accounts were announced yesterday. Industry commentators predicted that they would fail to meet the government's key objective of encouraging substantially more people on low incomes to save.

The proposals will hurt the middle classes. An estimated 750,000 savers will lose tax relief on part of their savings, because they already hold more in existing Peps and Tessas than the £50,000 ($83,500) ceiling on money that can be put into the ISA.

The government appears unrepentant. "It is right in principle and fair [to limit the total amount in ISAs]," said Geoffrey Robinson, paymaster general, who has masterminded the proposals. Savers with Peps and Tessas were "for the most part, well off people who have done extremely well out of the accounts".

The savings industry and the opposition Conservative party reacted angrily to what they saw as a retrospective tax bill on tax-free savings.

"This represents yet another Labour attack on savings on top of Gordon Brown's [the chancellor of the exchequer] pensions tax. It will hit prudent middle Britain and mean that those who have saved most will now pay more tax," said Peter Lilley, the Conservative shadow chancellor.

Robert Balfour, chairman of the Pep Managers' Association, said the proposals would "damage the public's perception of savings – it is bad news for people who have made an honest attempt to look after themselves".

But many Pep providers were privately relieved. Savings in the ISA will be tax-free, on top of a 10 per cent tax credit for dividends from UK shares during the first five years. The government had originally planned to limit relief to the basic rate of income tax, which would have cost top rate payers another £100m. But it is understood that Mr Robinson reversed the proposal in the last few days, fearing it would be politically too unpopular.

Some senior Labour MPs were surprised that the government had been so generous to big savers. "It looks as if ministers have bent over backwards not to upset middle England; £50,000 is a lot of money," said one MP.

Andrew Dilnot, director of the Institute for Fiscal Studies, the independent research body, agreed that it was "very unlikely that very large numbers of people who do not save will now start to save".

UK NEWS DIGEST

UN chief orders Lockerbie study

Kofi Anan, UN secretary general, last night named two international experts to study the Scottish courts system in a bid to break the legal impasse surrounding the bombing in 1988 of a Pan-American airliner over Lockerbie in southern Scotland. Libya claims the courts cannot deal fairly with the two alleged bombers. Former justice Enoch Dumbutshena from Zimbabwe and Dutch law professor Henry Schermers were due to arrive in London today and go to Scotland to visit courts and prisons. Mr Anan was responding to an invitation from the British government, which also proposed that the Organisation of African Unity and the Arab League send their own observers to Scotland. They have ignored the invitation.

Colonel Muammar Gadaffi has suggested that the accused terrorists be tried at a neutral place but not in the UK or the US. *Michael Littlejohns, New York*

■ BEEF BLOCKADE

Action may lead to trade war

Port blockades by farmers in north Wales against beef from the Republic of Ireland spread yesterday and threatened to trigger a trade war. The Irish Road Haulage Association warned of a possible boycott of British goods and said it would be demanding compensation for hauliers. Six trucks carrying refrigerated goods were refused entry to the port of Fishguard in south-west Wales. Farmers ignored pleas for calm from union leaders. They threatened to continue action against falling incomes and cheap beef imports and even extend blockades to supermarkets. The Irish RHA said members were angry that blockades were costing time and ruined deliveries, especially as most trucks to the UK were bound for mainland Europe. Jimmy Quinn, an official of the Irish RHA, said the threatened boycott would be a "worst case scenario". *Juliette Jowit, Cardiff*

■ PENSIONS MIS-SELLING

Albany Life fined $626,000

Albany Life was fined £375,000 ($626,250) and ordered to pay £32,000 in costs yesterday for failing to meet a target for clearing up its pensions mis-selling cases. It is the third biggest fine imposed by the Personal Investment Authority, the watchdog for the private investor, in connection with the scandal. Albany Life, which has recently been acquired by Canada Life from Metropolitan Life of the US for about £175m, failed to meet a target of clearing up 90 per cent of its most urgent cases by the end of September. Malcolm Kerr, Albany Life marketing director, said the company was not contesting the decision even though it believed its failure was "largely due to factors outside our control". *Christopher Brown-Humes, London*

■ ART CONTROVERSY

Video artist takes Turner Prize

The 1997 Turner Prize, the most controversial in British art, has been won by Gillian Wearing, a 34 year old artist who works mainly in video. She received the £20,000 ($33,400) award at the Tate Gallery in London last night. The prize, sponsored by the Channel 4 television channel, is given annually to the British artist under 50 who is said to have presented the most interesting show. All the four shortlisted candidates were women; all practice conceptual art. At the Tate she has shown *60 Minutes Silence*, in which 26 police officers face the camera for an hour as if posing for a photograph. *Antony Thorncroft, London*

■ CHARITIES

Donations hit 'virtual stagnation'

Voluntary donations to charity are in a state of "virtual stagnation", results from the latest Barclays/NGO Finance Charity 100 index show today. (Since the first quarter of 1996, overall voluntary income of the group of large organisations covered by the index has risen by a negligible 0.2 per cent. While it is impossible to prove a cause and effect relationship, the findings will increase concern that the National Lottery is reducing the level of direct public support for charities. *Alan Pike, London*

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Three positive things your company can do to mark World AIDS Day

1 Make accurate information available to your workers

"Business has to respond to AIDS for its own good. Most of the people affected by HIV here in the UK and around the world are of working age. Glaxo Wellcome's HIV awareness programme has been piloted in all our units in English speaking countries and is now being rolled out to virtually every member of our 55,000 strong workforce around the world.

"Other companies that recognise that the best way to fight the effects of this epidemic is from a position of awareness and preparedness can now use our materials: they are available from the National AIDS Trust *Employer's Initiative*."

Sir Richard Sykes
Chairman, Glaxo Wellcome

2 Challenge discrimination against people with HIV/AIDS

"W H Smith's support for the National AIDS Trust *Employer's Initiative* reflects the way we have approached discrimination of all kinds. We recognise that although they can be equally damaging to our business and the people in it, different areas of discrimination must be looked at and addressed in ways that are specific and effective.

"HIV and AIDS can and do make new and different demands of our people and it is our duty to prepare them to meet those demands. The information and advice that is available from NAT can help other employers to plan what they should do about HIV."

Richard Handover
Chief Executive, W H Smith

3 Go public with your support

"By making your policy commitment against discrimination known you not only encourage other employers to follow your lead, you offer hope to the thousands of people living with HIV and AIDS in the UK. Most of them are still at work and will want and need to work for many, many years.

By endorsing our Statement of Employment Principles for HIV/AIDS you embrace the very best in employment practice and send a clear message to everyone."

Derek Bodell
Director, National AIDS Trust

On World AIDS Day, 1st December, the United Nations Joint Programme on AIDS (UNAIDS) estimates that over 30 million adults and children are living with HIV infection – one in every 100 sexually active adults worldwide.

The NAT Employers' Initiative

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The NAT Employers' Initiative is funded by the AIDS Crisis Trust, Levi Strauss, Glaxo Wellcome and WH Smith.

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هكذا من الاهالي

An oasis in the cultural desert

William Weaver finds a feast of delights at the New Jersey Performing Arts Center in Newark

New Jersey may be known as the "garden state" and it can rightly boast natural beauties and cultural riches, but for a Manhattanite a trip to Newark represents an adventure, perhaps even a challenge.

People from New Jersey – contemptuously referred to by New Yorkers as the "bridge and tunnel" crowd – pour into the metropolis nightly, to patronise the fashionable restaurants, fill the theatres and, weather permitting, simply to gawk.

But for the most part the traffic is one-way. Older citizens in the metropolis still recall with horror the devastating Newark riots of 1967, which contributed to that city's acres of urban blight, drove the resident middle-class to farther suburbs and exacerbated poverty and crime.

A decade ago, New Jersey's governor Thomas Kean proposed the construction of an immense performing arts centre in the very heart of Newark's desolation. More than $180m later, the New Jersey Performing Arts Center is a reality, proudly standing, like a monumental cathedral complex, in the midst of a much repaved and improved downtown Newark.

Some time will have to pass before the lasting success of this brave venture can finally be assayed; but already, even on the basis of a few visits, the NJPAC can unquestionably be proclaimed an invaluable cultural asset, important not only for New Jersey but for the whole world of the performing arts.

After its gala inauguration in mid-October, the Centre has drawn capacity crowds to a head-spinning series of events, filling the two performing spaces not just with ticket-holders, but with brilliant performers and cheering fans. In the smaller 514-seat Victoria Hall, visiting artists have included the Canadian puppet troupe Théâtre sans Fils in *The Dream Catchers*, based on studies of children's dreams, followed by jazz artists Sergio Salvatore and James Gibbs, and the Crossroads revival of August Wilson's play *Jitney*. The Crossroads company will be one of NJPAC's several important affiliates, along with the Alvin Ailey troupe, the Lincoln Center Jazz Orchestra, American Ballet Theatre and New York Shakespeare Festival.

The larger 2,750-seat Prudential Hall serves as home base for the New Jersey Symphony Orchestra, currently directed by Zdenek Macal, and it will also house guest performances - not only of symphony orchestras, but also of stars like Roberta Flack, Tito Puente and Celia Cruz. Closer to Christmas there will be a *Messiah*, a Christmas Pops concert, a Kwanzaa festival and the Harlem *Nutcracker*.

Unable to cover everything, I decided to eschew an all-star *Beethoven Ninth* (inevitably accompanied by the appropriate speeches and auguries) in favour of a later, less glittering NJSO concert and another by one of the centre's first foreign guests, the Gulbenkian Orchestra of Lisbon, making its US debut. Not entirely speech-free, the two events afforded an excellent occasion to examine and appreciate the new complex.

Prudential Hall is a festive, welcoming house, of a warm Pompeiian red, gently raked to provide excellent sight-lines. A New York Times critic was not entirely convinced by the acoustics, but I found them warm, enfolding and limpid.

For the NJSO programme, Macal conducted a fiery, shimmering, voluptuous *Symphonie fantastique*, preceded first by the world premiere of a commissioned two-movement piece by Richard Danielpour, *Celestial Night* – pleasant, dreamy, with well-placed opportunities for the various voices of the orchestra.

The central part of the evening was a somewhat tame, thin reading of the *Tchaikovsky Violin Concerto* by Shlomo Mintz, in a programme that seemed less than committed, though by no means unenjoyable.

There was also a solo violinist for the Gulbenkian's debut: the American resident Elmar Oliveira, whose Brahms concerto was enjoyable but not thrilling. But the orchestra – trained to razor-sharp precision by its Shanghai-born permanent conductor Muhai Tang – shone radiantly in a light, magical *Classical Symphony* by Prokofiev and an ebullient but deeply-felt *Dvořák Eight*.

Many inhabitants of the Newark area came originally from Portugal, and the Gulbenkian's appearance was part of a larger "salute to Portugal". Among the officials in the audience was an honoured guest, the great *fado* singer Amalia Rodriguez: it was strange and moving to see her in Newark, having last seen her, half a century ago, in a Parisian cave during my student days, when she was murmuring her exotic repertoire to a little underground room filled with smoke, admiration and political exiles.

Elmar Oliveira: 'salute to Portugal'

Gallic pride at any cost

Paris is now the most vibrant city for opera in Europe, writes Richard Fairman

Renée Fleming: glorious singing as the Marschallin in an expensive-looking production of 'Der Rosenkavalier' at the Opéra Bastille

Paris is about 10 years ahead of London in the operatic cycle. The state-of-the-art new opera-house has been completed, the arguments about which of the opera and ballet companies is to perform where have been thrashed out, and the city is now getting on with presenting an amazingly full programme of opera in its various theatres.

Those who have the job of piloting London's opera-houses through the same period should note that it was never plain sailing. The Opéra Bastille fed the newspapers with front page stories for years: the costly stage machinery did not work, the music director was sacked in an embarrassing public showdown and the unions went on strike again and again. Some of these storms will no doubt blow across the Channel. The Royal Opera would do well to batten down the hatches now.

How did Paris survive to make itself the most vibrant city for opera in Europe? The answer is simple: money. Whatever squabbles may have gone on, there has never been any waiver in the French willingness to pay for artistic supremacy. Gallic pride has ensured a splendid operatic programme spread across four magnificent theatres at a budget that would make Anglo-Saxon eyes water.

At the Opéra Bastille there is currently an expensive-looking, new *Der Rosenkavalier*. Although this was a co-production with the Salzburg Festival, any staging of the opera taxes a company's resources. Paris may not have the Vienna Philharmonic, but the Bastille players are well equal to Strauss's challenging orchestral writing.

The sound in this huge theatre becomes silky smooth and rather recessed, which seconded Edo de Waart's good-sense conducting. He kept an ideal balance between pit and stage, considering that the Bastille's widely-rumoured amplification system seemed to be switched off – a highly commendable decision in the circumstances.

The dominance of American singers at the Bastille here reached its peak. Susan Graham, the fast up-and-coming mezzo, showed why she has become hot property as a passionate, decisive Octavian. Barbara Bonney, once a gleaming Sophie, sounded rather less than that on her top notes, though she still radiates a beautiful aura. Renée Fleming, positioned to be the Strauss soprano of her generation, sang gloriously, but tended to externalise the Marschallin's emotions. Perhaps that is the only way in this theatre.

With Franz Hawlata working overtime playing Baron Ochs as a city sharp-dealer, and a more than adequate cast down through the ranks, this was potentially a strong performance. Herbert Wernicke's production has been widely credited as controversial, but here seemed more an interesting experiment that failed to deliver.

Setting the opera in a mirror-image of the Bastille that reflected the audience's faces was to my mind a typical gesture of German didacticism. Nor is an updated *Rosenkavalier* new to Paris. The same was done at the Théâtre du Châtelet a few years back with more subtlety and magic.

This month at the Châtelet the new production is a fresh look at Humperdinck's always loveable *Hänsel und Gretel*. It is hardly possible to serve up this opera to adult audiences these days as a sugar-coated fairy-tale and Yannis Kokkos, doubling as producer and designer, went for a compellingly individual visual style, allied to some half-baked references to modern life.

Amid the smoking chimneys of a Victorian industrial town, Hänsel and Gretel are growing up as deprived workhouse children. Their escape from this miserable world leads them into a barren forest, where acid rain long ago did its worst, and only in their dreams does life flower into dazzling colour. The apparition of the angels was nicely done, as infants clad in white arrived sliding down a little chute. Unfortunately, Kokkos came unstuck with the witch's scene. His hi-tech nurse, bearing a broomstick in one hand and a hypodermic needle in the other, raised no laughs and left Georges Gautier, the tenor Knusperhexe, grounded.

The musical performance was of high quality throughout. There cannot be a better Hänsel and Gretel anywhere to be found than Randi Stene and Ruth Ziesak respectively, whose bedtime duet in the forest scored high on the goosepimple monitor. Franz-Josef Kapellmann was the forceful Father, Gwyneth Jones a warm-hearted Mother. In the pit the Philharmonia showed off the impressive skills it has attained under its new principal conductor, Christoph von Dohnányi.

At this rate British opera-lovers, like the Philharmonia, might consider taking out a season ticket on Eurostar.

Hänsel und Gretel is sponsored by France Telecom Fondation.

Theatre/**Alastair Macaulay**

Nice, good and unexceptional

Stephen Churchett's new play, *Heritage*, has several virtues, but liveliness is not among them. Churchett had the extraordinary but deserved distinction this spring of having his first play, *Tom & Clem*, presented in the West End with Michael Gambon as T. Driberg and Alec McCowen as C. Attlee. Like *Tom & Clem*, *Heritage* has a keen sense of history, and makes fine use of compassion. It is also – so my date assured me – exceptionally accurate in its depiction of its locale, which is the home of the Chelsea Pensioners, with loud helicopters flying close overhead every so often. And so on.

But *Heritage* is tepid and slow. It tries to mix an old-Tory sentimentality about honouring the past with a new-Tory friendliness to homosexuals, and at regular intervals it reflects tenderly about death. Four of the five characters are nice and good and unexceptional, and come from a family that has apparently always been nice and good and unexceptional.

Harry is a dear, good-humoured, tree-loving Chelsea Pensioner with a mobile phone; George is his middle-aged antique-dealer son, now in mourning for his recently deceased male lover; May is Harry's middle-aged middle-class married daughter; and Rupert is May's charming, thoughtful 19-year-old son. They all come to visit Harry and talk about their lives and resent the modernisations that are being planned for the allotments of the Chelsea Pensioners.

The fifth character is neither particularly nice nor particularly good – she is an insensitive modern blonde who talks mindlessly modern consultancy-speak and is having an affair with May's husband – but, since Churchett and his characters are nice and good, they can't bring themselves to have the fun at her expense that lesser people might enjoy. At one or two delicious moments, she almost turns into a caricature in a Victoria Wood sketch. "I hate dying" she says, and leaves a pause, as if dying is something that she has been regrettably obliged to do at regular intervals. Then you realise that she means that she hates death as idea or as fact; and she adds that she can only cope with it "by taking the long-term view". Such silliness does your heart good, but Churchett prefers other and worthier ways of doing your heart good. There is more sensitivity in this play than you can shake a stick at.

Mark Rayment directs. His general pacing is good, but there are patches when the lines are delivered with a tad more tepidity than their writing deserves. Tim Pigott-Smith as George, Gwen Taylor as May and Gideon Taylor as Rupert all do good things without ever quite making their characters three-dimensional. The major interest of the production is that it brings George Cole (after umpteen years on TV) back to the stage, as Harry; and no doubt all the play's sensitivity will be a sweet surprise to those who think of him only as an artfully dodgy operator. His timing is excellent, his underplaying style nearly gives the play the still centre it seems to want, and his quiet humour could not be bettered. You wish that you saw him onstage more often. He, however, may feel otherwise at the end of this one. For its final gesture – no, I won't describe it – is also its worst moment, and poor Cole has to deliver it. You watch, you blush for Cole, you think "But they don't write plays like this any more!", and you forget it as quickly as you can.

Hampstead Theatre, London NW3.

INTERNATIONAL ARTS GUIDE

■ AMSTERDAM

EXHIBITIONS
Stedelijk Museum
Tel: 31-20-5732911
www.stedelijk.nl
Malevich: Works on Paper from the Khardzhiev Collection Exhibited for the First Time. 79 drawings in pencil, chalk, gouache, ink and watercolours, spanning almost the whole of the Russian avant-garde artist's career. Until Khardzhiev's death in 1996 his collection was not made available for public display; to Jan 25

■ BERLIN

OPERA
Deutsche Oper
Tel: 49-30-34384-01
Die Zauberflöte: by Mozart. Staged by Günter Krämer, with sets and costumes by Andreas Reinhardt; Dec 7

■ BOLOGNA

OPERA
Teatro Comunale
Tel: 39-51-529 999
www.nettuno.it/bo/teatrocomunale
Turandot: by Puccini. Revival conducted by Daniele Gatti in a staging by Hugo de Ana; Dec 4, 6, 7

■ CHICAGO

OPERA
Lyric Opera of Chicago
Tel: 1-312-332 2244
www.lyricopera.org
Amistad: world premiere of Anthony Davis's new work about the 19th century anti-slavery campaign. Dennis Russell Davies conducts a production by George C. Woolfe; Dec 5, 8

■ EDINBURGH

EXHIBITIONS
Scottish National Gallery of Modern Art
Tel: 44-131-624 6200
Correspondences: transferring from the Martin-Gropius-Bau, Berlin, a selection of works by six young Scottish and six young German artists. Organised as an exchange, the display includes painting, sculpture, video and light projections; to Feb 1

■ FRANKFURT

EXHIBITIONS
Schirn Kunsthalle
Tel: 49-69-299 8820
Holy Russia: Icons and the Rise of Moscow 1400-1600. 50 rarely exhibited icons lent by Russian museums are the centrepiece of this exhibition, which also includes 16 manuscripts. The period was a crucial one, which marked the rise of Moscow as a principality ruled by powerful Tsars. Its architecture and art reflect this shift, and illustrate a remarkable synthesis of Renaissance ideas with traditional Byzantine forms. To Mar 1, after which the exhibition will travel to London

■ LONDON

CONCERTS
Barbican Hall
Tel: 44-171-638 8891
Sarah Chang: recital by the violinist of a programme including works by Strauss and Brahms. With pianist Charles Abramovic; Dec 7

EXHIBITIONS
National Portrait Gallery
Tel: 44-171-3060055
Hyenas in Petticoats: Mary Wollstonecraft & Mary Shelley. Celebration of the joint bicentenary of the two women writers, the birth of the latter having caused her mother's death. Through portraiture, drawings and manuscripts the display examines their lives, times and writings; to Feb 15

OPERA
English National Opera, London Coliseum
Tel: 44-171-632 8300
● Falstaff: by Verdi. This co-production with Opera North, first seen in Leeds, is conducted by Dohnányi and directed by Matthew Warchus. Cast includes Alan Opie in the title role; Dec 3
● The Magic Flute: by Mozart. Nicholas Hytner's English National Opera production, revived by David Ritch and conducted by Christopher Moulds; Dec 4, 6

Shaftesbury Theatre
Tel: 44-171-379 5399
The Royal Opera: Il barbiere di Siviglia, by Rossini. New production staged by Nigel Lowery; Dec 3, 4, 5, 6

THEATRE
Riverside Studios
Tel: 44-181-741 2255
Oh Les Beaux Jours: by Samuel Beckett (1961). Peter Brook directs Beckett's French language version of Happy Days; Dec 3, 4, 5, 6

■ LOS ANGELES

OPERA
L. A. Opera, Dorothy Chandler Pavilion
Tel: 1-213-972 8001
www.laopera.org
Countess Maritza: by Kálmán. Premiered in Santa Fe this summer, this lively production by Linda Brovsky stars Ashley Putnam and is conducted by John Crosby; Dec 5, 7

■ MADRID

DANCE
Teatro Real
Tel: 34-1-516 0600
The Royal Ballet: Anthony Dowell's staging, with designs by Maria Bjornson; Dec 3

EXHIBITIONS
Fundació "la Caixa"
Tel: 34-1-435 4833
Joaquim Mir, 1873-1940: A Life's Journey. Retrospective of around 140 works by the landscape painter; from Dec 3 to Jan 25

■ NEW YORK

DANCE
New York City Ballet, New York State Theater
Tel: 1-212-870 5570
George Balanchine's The Nutcracker; Dec 3, 4, 5, 6, 7

OPERA
Metropolitan Opera, Lincoln Center
Tel: 1-212-362 6000
www.metopera.org
● La Clemenza di Tito: by Mozart. Conducted by James Levine in a staging by Jean-Pierre Ponnelle. Cast includes Anne Sofie von Otter; Dec 3, 6
● The Rake's Progress: by Stravinsky. New production by Jonathan Miller, conducted by James Levine. Cast includes Dawn Upshaw and Samuel Ramey; Dec 4, 6
● Turandot: by Puccini. Revival of a staging by Franco Zeffirelli; Dec 5

■ PARIS

CONCERTS
Salle Pleyel
Tel: 33-1-4561 6589
Orchestre de Paris: conducted by Wolfgang Sawallisch in works by Beethoven. With soprano Eva Mei, tenor David Kübler, bass Jan-Hendrik Rootering and Choir led by Arthur Oldham; Dec 3, 4, 6

OPERA
Opéra National de Paris, Opéra Bastille
Tel: 33-1-4473 1300
Der Rosenkavalier: by Strauss. New production conducted by Edo de Waart in a staging by Herbert Wernicke. Cast includes Renée Fleming, Susan Graham and Barbara Bonney; Dec 3, 6

Opéra National de Paris, Palais Garnier
Tel: 33-1-43439696
The Merry Widow: by Franz Lehár. Armin Jordan conducts a new production directed by Jorge Lavelli, with sets by Antonio Lagarto; Dec 3, 6

■ SAN FRANCISCO

OPERA
San Francisco Opera, War Memorial Opera House
Tel: 1-415-864 3330
www.sfopera.com
● Eugene Onegin: by Tchaikovsky. Yuri Temirkanov conducts his 1980s Kirov Opera production, with a cast including Anthony Michaels-Moore; Dec 5, 7
● Pelléas et Mélisande: by Debussy. Conducted by Donald Runnicles in a production by Colin Graham. Frederica von Stade and Simon Keenlyside sing the title roles; Dec 3
● Rigoletto: by Verdi. Conducted by Patrick Summers in a production by Mark Lamos, with sets by Michael Yeargan; Dec 4, 6

■ VIENNA

EXHIBITIONS
Kunstforum der Bank Austria
Tel: 43-1-533 2266
Art and Insanity: wideranging survey of the relationship between madness and the visual arts, from the Baroque to the modern. The 350 works on display include Géricault's portraits of the mentally ill, 19th representations of lunatic asylums, expressionist works, and a selection of works by psychotic and schizophrenic artists; to Dec 8

■ TV AND RADIO

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17.30: *Financial Times Business Tonight*

● **CNBC**
08.30: *Squawk Box*
10.00: *European Money Wheel*
18.00: *Financial Times Business Tonight*

Lionel Barber

Life on the outside

Plans to form a 'euro-club' of founding Emu members have taught Britain it cannot have its cake and eat it

Since the Labour government entered office six months ago, it has pretended that delayed entry into economic and monetary union would be virtually cost-free for Britain. A single Gallic thrust has exposed the policy as threadbare.

In the words of Dominique Strauss-Kahn, France's finance minister, monetary union is a marriage. And as he observed with undisguised relish on Monday night in Brussels: "People who are married do not want others in the bedroom."

So now we know. No special favours for Britain. No more illusions that the City of London, the size of the UK economy, or the "Blair-effect" will alter the fact that life outside the single currency zone will be a lot colder.

For more than 12 hours, Gordon Brown, the chancellor, pleaded with his fellow finance ministers for equal treatment from the future Emu members. But he returned empty-handed.

The issue looks innocuous enough: a Franco-German plan to create an informal "euro-club" for the founder members of Emu. Indeed, not so long ago, Mr Brown dismissed inquiries on this subject as trivial. But on Monday night, he upped the ante, exposing the emptiness of Labour's rhetoric about "leadership in Europe" and its fears about second-class European Union membership.

The euro-club was dangerous and divisive, declared Mr Brown. It would undercut the Ecofin council of EU finance ministers, the chief decision-making forum on macroeconomic policy. Emu was a work-in-progress, not a one-off event. Countries aspiring to join Emu should be taken at their word. The new euro-forum should be open to all.

The chancellor drew support from the Danes, Swedes and Greeks, all of whom have declared they will not be ready to join the first wave of Emu. The Irish also offered good neighbourly noises. But the reaction of the other 10 countries, particularly the French and Germans, was uncompromising.

No one could prevent the euro-bloc holding meetings, they said. Issues such as enforcing fiscal discipline on Emu members and discussing euro exchange rate policy against the dollar were a matter for Emu members alone. The only question was this: would the UK-led opponents agree to a common understanding on the operation of the euro-club or risk the "ins" meeting outside the safeguards of the EU treaties?

Here is the line in the sand. For six months, Tony Blair, the prime minister, and his colleagues have persuaded themselves that there was no such division. Theirs was a policy of flirtation towards Emu. Britain will join, but not yet. Labour will hold a referendum, but not until after the general election. Perhaps in early 2002.

As a domestic political strategy, the Emu policy has worked a treat. Labour's statement that there were no constitutional objections to joining the single currency triggered turmoil in the Conservative party. The plan to win over the business constituency, massage public opinion, and consign the Tories to permanent opposition looks like a winner.

> Labour is almost certainly underestimating the speed with which events will move once EU leaders select the single currency members in May

High-flying Labour takes a second term for granted. Ministers talk about Mr Blair dominating the European stage long after the likes of Helmut Kohl, Germany's chancellor, and Jacques Chirac, France's president, have shuffled off into retirement. Sure, the Emu policy is about buying time; but the goal is its co-leadership with the French and Germans.

Labour is almost certainly underestimating the speed with which events will move once EU leaders select the single currency members next May. This could mean accelerated "convergence" between the Emu group, making it harder for Britain to catch up.

Labour, like its Conservative predecessors, appears to have misunderstood the *political* nature of the Emu exercise. As Mr Strauss-Kahn says, sharing a single currency is something intimate. It is not like sharing fish quotas.

In the past few weeks, the Emu debate has undergone a subtle change. No one is talking any more about whether France, Germany or Italy will meet the public deficit criterion for entry into monetary union. In Brussels, Paris and even in the Federal Reserve in Washington, the code is "E-11", meaning all but four countries are likely to be present at the creation of the single currency on January 1, 1999.

Now that finance ministers have stopped squabbling over decimal points, they are turning to the serious issue of how to coordinate macroeconomic policy in the post-Emu world. This week's agreement on a code of conduct regulating tax competition is one straw in the wind. So was last month's summit agreement on guidelines for employment and job creation.

Of course, there are risks in the Emu enterprise. The French pay lip service to the independence of the future European Central Bank but want a Frenchman in charge. Paris sees the euro-club as a political counterweight to the ECB. The Germans are fixated by price stability. The Bundesbank is nervous about forming a single currency zone with inflation-prone Mediterranean countries.

But the political will to make it work is as strong as ever. British participation in the euro-zone would increase the credibility of the new currency. All EU member states agree on this point. But for the moment, Labour has failed to exploit its position as a desirable future member. Instead, Mr Brown has staked his government's reputation on a lost cause: membership of the euro-club.

All is not lost. Jean-Claude Juncker, the Luxembourg prime minister, says he wants a compromise involving all 15 member states. Mr Blair could make clear that he accepts that the "ins" have a right to meet and to establish clear limits to their discussion. Britain could also receive a summit declaration that Ecofin remains the prime decision-making forum.

Without a deal, the risk is that the Emu group moves ahead without any safeguards for the outsiders. Bad blood could spill into other issues such as enlargement where Britain has a vital interest. An all-or-nothing approach would spell a rerun of the busted Conservative policy toward Europe. For Labour, this was the week in which the reality of life in Europe sank in.

Opec looks for a long-term future

Robert Corzine on the organisation's decision to increase oil output

Opec is fighting back. It will never again be the Opec of the 1970s when it held the western world to ransom and increased oil prices almost at will. But a new Opec may be emerging, whose core members (Saudi Arabia and its neighbours) are again intent on ratcheting up their influence over the world's oil supply.

Last week members of the Organisation of Petroleum Exporting Countries agreed to raise output by 10 per cent, ending years of officially tight restraint over production. Oil prices fell sharply this week in response, which some took as further proof of the group's declining influence.

Such an assessment may be premature. The decision to raise output could mark the return of Opec – or at least some of its key members. The world may again be on the verge of increasing its reliance on Opec oil.

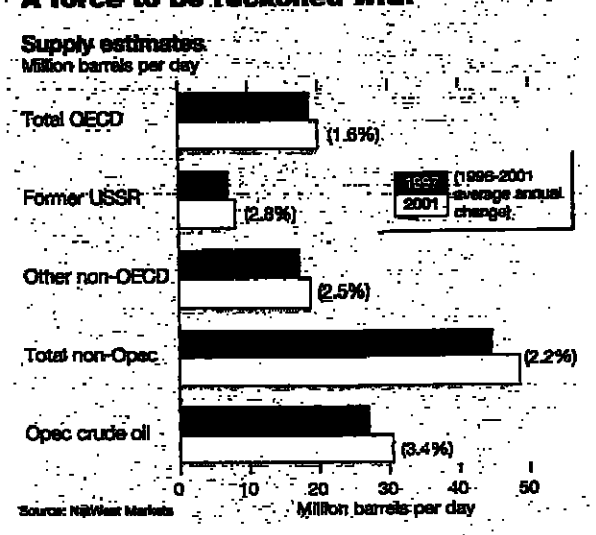
In the 1980s and early 1990s, Opec's influence had certainly waned. By driving up prices far beyond production costs, Opec encouraged big non-Opec producers such as Norway, Mexico and the UK to exploit what had previously been uneconomic fields. Technology was used by these countries to drive down costs, boost output and capture the lion's share (two-thirds) of growing demand.

Opec's inability to maintain internal discipline in the face of such challenges threatened to turn it into a joke in the eyes of world oil markets. Before the group's latest meeting in Jakarta cheating on national production quotas had taken total Opec output close to 28m barrels a day, 3m b/d above its official output ceiling.

But all this may be changing. The confidence with which Saudi Arabia pushed for higher output reflects its view that the fundamentals of the oil business may be shifting back in its favour.

Saudi officials do not believe non-Opec members will be able to boost output much further, at least not in the next few years. True, the recent rush of western oil investment into the Caspian Sea region and Central Asia could bring new oilfields on stream but this will not be for at least 10-15 years. More generally, equipment and skills shortages in the international industry could take their toll on future output.

A force to be reckoned with



Saudi officials may also have been reassured by the increasing interest in the Gulf of western oil companies seeking access to the region's energy reserves. Although billions of dollars are spent each year in exploration outside Opec countries, large discoveries are increasingly rare.

The steady opening of Opec countries, especially those in the Gulf, to foreign oil investment should boost Opec's share of the world oil market. Tehran this week announced that foreign companies would be allowed to explore for oil in Iran for the first time since before the Islamic revolution.

Even if the Saudis and other Gulf producers are right in their assessment of world oil trends, the new Opec will not be like the old. The development of a deep and transparent global oil market fed by diverse suppliers has forced the organisation to give up any attempt to fine-tune oil supplies to meet short-term changes in global demand. Last week's decision by Opec is an attempt to re-establish credibility by raising official output to a realistic level. It marks "a turning point" for the organisation, according to a delegate from a big Gulf Arab producer. "People doubted Opec could act to correct the big divergence that had emerged between official and actual production rates."

Sceptics say Opec has still not proved it can keep output within its official limits, even the new ones. They may be right. But perhaps the most important development to emerge from Jakarta was proof that Saudi Arabia, Opec's dominant member, believes it can achieve its oil policy goals within the Opec framework. So long as that is the case, and if it can do so without triggering the overt opposition of other big Opec states such as Iran and Venezuela, Opec's relevance will be reinforced.

Until recently, Saudi Arabia has stuck to the quota of 8m barrels a day it was given in September 1993. The steadiness of Saudi output has been a vital element in the recovery of world oil prices over the past two years. But Riyadh has become increasingly frustrated at not being able to take its share in the growth of world demand.

Those who stand most to benefit from the Jakarta deal are Saudi Arabia, Kuwait and the United Arab Emirates, the three members that have usually stuck to their quotas and have spare production capacity.

Those who will see the least benefit include traditional price hawks such as Iran and Libya, which may struggle to fill their new quotas. They have put up little resistance to the Saudi proposals, even though prices were almost bound to fall. (Riyadh may have given private assurances that it would only increase output gradually, although the official Saudi line is that it will take the full increase from January 1).

The Saudis are also encouraged by the fact that virtually all the world's spare oil production capacity is now in the hands of Opec. In the long run, they believe, this will help to drive up prices. The Jakarta agreement will reduce the spare capacity outside Iraq, which remains under a UN oil embargo, to around 2m barrels a day, less than 3 per cent of world demand. Most of this is in Saudi Arabia.

If the world's dependence on Opec were again on the rise, could there be a rerun of the Opec-induced petrol queues of the 1970s? Probably not – unless the politics of the region changed dramatically. Some US commentators are already speculating about what might happen if Iraq and Libya, two Opec states under international sanctions, decided to mount their own mini-oil embargo against the west.

LETTERS TO THE EDITOR

Number One Southwark Bridge, London SE1 9HL

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Lesson for Korea is that market efficacy should be challenged

From Ms Susana Valdivieso.

Sir, Stephen Fidler's article "Might Asia lose a decade?" (November 27) is misleading and rather cynical. If something can be said about Latin American economic evolution after the debt crisis it is that:

- the International Monetary Fund orthodox stabilisation and structural reform packages have not led to sustainable macro-economic stability and have induced devastating costs in terms of employment, income distribution, growth and welfare
- the adoption of financial liberalisation and deregulation programmes have, sooner or later, led to over-borrowing, bankruptcies and financial turmoil.

Instead of advising Korea to abandon its development model and accept IMF conditions, Mr Fidler should urge financial multilateral institutions to review their assumptions about the perfection, efficiency and rationality of markets, to reasses the incidence of external financial and trade shocks in the economic evolution of less developed economies and to promote the international regulation and control of short-term speculative capital flows.

Susana Valdivieso,
139 Av. Franklin Roosevelt,
1050 Brussels, Belgium

A real winner in the jargon stakes

From Mr John Wareham.

Sir, The jury that back-handedly awarded the "hands-down" prize for glibness to the flyer for my One-Day MBA seminar ("Prize-winners in the business of jargon", November 24) was undoubtedly more clever that it quite realised, for that purportedly incomprehensible prospectus sold out the entire Dorchester ballroom. Then, later, more than two-thirds of those attending recommended a friend or colleague to attend a subsequent presentation. Hey, *that's* the kind of tribute we all go to work for, right?

John Wareham,
Wareham Associates,
Suite 7A,
30 East 21st St,
New York, NY 10010,
US

From Mr Nick Mathys.

Sir, Congratulations on your jargon competition ("Prize-winners in the business of jargon").

Do not let anyone, victors or others, attempt a justification. The use of jargon is merely an attempt by the uneducated to impress the illiterate.

Nick Mathys,
19 Havengore,
Springfield,
Chelmsford,
Essex CM1 6JP

The great lie about fox hunting

From Mr D. Lowes.

Sir, I can agree with Philip Stephens "Morality hounded" (November 28) on one thing; tragically this passionate struggle has obscured the real issues on fox hunting. The real loser from a ban would be the wildlife, which many well-meaning but ill-informed supporters of Michael Foster's bill have been deceived into thinking will benefit. That, sir, is the great lie of an unscrupulous and cleverly organised campaign.

Where has Mr Stephens heard that the countryside rally sought to uphold a cherished social order? Does he mean the 20,000 people employed in hunting, anxious to escape the yoke of their feudal employment for the freedom of the dole and the council housing queue?

Where is the evidence of exhausted foxes dying underground after a chase calculated to prolong their terror? Or of them being shredded and disembowelled by hounds, while still alive? The killing of a fox by a hound is the only way of being 100 per cent sure of death after the first contact. The alternatives all have a high risk of wounding, so that the fox escapes to die slowly, or lingers trapped until the final chill of terror as his tormentor approaches to kill the helpless animal. Hunting is not the only method of control, but neither is it the cruellest.

If avoidance of cruelty motivates abolitionists, why stop even one fox being killed by hounds, let alone 20,000? Or is this just another minority whose welfare is beneath the contempt of the politically correct majority?

Mr Stephens is concerned about foxes. What about Mr Foster's fish, which knows it is caught from the moment it is hooked? Having been slowly drowned until too exhausted to fight, it is landed and killed or released in heaven knows what physical state. No wonder the inconsistencies of abolitionists so deeply worry the countryside, or that 120,000 country people bothered to turned up at the countryside rally.

Bear-baiting existed solely to provide a sadistic spectacle. A comparison with fox hunting is one more affront to those who follow the hunt and to Mr Stephens's own abilities as an accomplished journalist to distinguish fact from fantasy.

David Lowes,
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UK

Interest rates bar to recovery

From Ms Ruth Lea.

Sir, I read Sir Bryan Nicholson's letter "ERM not stimulus for UK economic ills" (November 27) with bemusement. In my letter of November 20 I was not referring to the problems of the economy prior to our ERM membership. I was referring to our problems while we were in it. Of course, the high exchange rate was a deflationary factor – all economists would accept that. Moreover, I am aware that interest rates fell during our membership of the ERM. But there is no doubt that interest rates were far too high in 1992 for the economy to experience a buoyant, sustainable recovery. The markets knew that. And so did the government. After "Black Wednesday" it chose to stay out of the ERM (thus releasing itself from the shackles of high German interest rates) and cut interest rates by 4 per cent in as many months. No wonder Norman Lamont, the chancellor, sang in his bath.

On the matter of consulting IoD members, we have a very comprehensive set of consultative procedures. Moreover, we have consulted widely on Emu. We have, for example, asked for members' views on Emu through our monthly newsletter IoD News (which is circulated to every member). And at our 1996 annual convention, to which all members were cordially invited, there was an open debate on the topic which resulted in only 30 per cent of those attending favouring Emu. A follow-up opinion survey of our members confirmed this finding. Finally, every member is free to write to me and contribute to our policy making – my recent correspondence suggests Emu doubters outnumber Emu supporters by three to one.

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COMMENT & ANALYSIS

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Brown and the euro-club

Gordon Brown, the UK chancellor, insists his country should be a member of the new "euro-club" for participants in the prospective monetary union. This seems absurd. The UK cannot combine the freedom of an outsider with the influence of an insider. Yet Mr Brown does highlight a genuine risk: that of dividing the European Union unnecessarily.

The creation of an informal group to co-ordinate the policies of those sharing a single currency is not just inevitable, but quite sensible. As Dominique Strauss-Kahn, the French finance minister, wrote in the FT last week, co-ordination is needed. Its aims are to persuade citizens that responsibility for macroeconomic policy does not rest with the European Central Bank alone; to provide better information on the planned evolution of fiscal policy and on attitudes towards the exchange rate; and to ensure participants in the euro present their views effectively at the global level.

The required co-ordination is closer than that needed between participants and non-participants. Yet the Maastricht treaty does say that "member states shall regard their economic policies as a matter of common concern". Given the close links among EU members, through the single market, this also is common sense. Indeed, the bigger the economy the more its policies concern others, as German unification proved. This must be overwhelmingly true, therefore, for a group that generates most of the EU's output and trade.

How then are the legitimate interests of insiders and outsiders to be reconciled? The solutions are for the new club both to allow outsiders in as observers and to restrict its informal discussions to policies closely related to the shared currency.

Mr Strauss-Kahn risks going too far, therefore, when he writes that the informal club should exchange views on decisions to be taken subsequently in the council of finance minister. This indicates a desire to create an inner group to pre-cook decisions in areas that concern outsiders as much as they do insiders. That is both unnecessary and provocative.

Mr Brown may look ridiculous when he insists on the right to put his mouth where he has failed to put his money. But it is in the interests of harmony within the EU for discussions in any euro-club to be limited to those essential for managing the euro, rather than range over the whole of economic policy. Outsiders cannot expect to be insiders where they have chosen not to be. But they can reasonably expect not to be treated as outsiders where they have not made (and could not make) such a choice.

Power in Iran

When power struggles erupt in the Islamic republic of Iran, the usual reaction in the west is to marshal the rival factions into moderates and reformists and hardliners and conservatives. The reality is usually more colourful and unstable, like the shifting patterns in a kaleidoscope, and so it is now.

Clearly observable through the telescope is a troika: Ayatollah Ali Khamenei, successor as supreme spiritual and political leader to Ayatollah Khomeini; Mohammed Khatami, elected president by a landslide against the mullahs' favoured candidate in May; and former president Ali Akbar Hashemi Rafsanjani, head of a reinvigorated "Expediency Council" with oversight of government policy.

The present power struggle, waged through the mosque, the media, and violent street gangs, was started by none of the three, but by Ayatollah Hussein Ali Montazeri. He questioned Mr Khamenei's theological credentials and paramount power – a stab at the heart of Iran's constitution based on *velyat-i-faqih*, or rule by a supreme Islamic jurisprudent. Mr Montazeri, who lost the struggle to succeed Khomeini himself, is one of several senior Shi'a clerics who feel religion must be separated from state power and taint, and who scorn Mr Khamenei as a usurping junior of small intellectual stature.

While this is a separate battle from Mr Khatami's preaching of pluralism and the rule of law, it has allowed entrenched interests around the regime to go on the offensive for the first time since their annihilation at the polls in May.

The May vote was an electoral insurrection led by disaffected youth and women, and was felt as a mortal threat by Iran's theocrats. But Mr Khatami, with no power base except his 70 per cent of the vote, has tried to keep above the factional fray.

He has made many enlightened appointments and begun moving against zealous enforcement of religious and social uniformity. He has improved relations with Europe and the Gulf Arabs, and overseen some important new investments in Iranian oil and gas, in spite of US sanctions.

Last week, in seeming alliance with Mr Rafsanjani, he dissociated himself from the attempt to question Mr Khamenei's legitimacy, instead stressing reform within the system. Mr Khatami is using his popularity to try to gather Iran's myriad factions around the office of the president and make it the centre of the kaleidoscope – for the moment the only feasible way forward to a more open and prosperous society. He has survived one obvious provocation by his enemies, but many more surely await him.

Two Congos

The French government is supposed to have abandoned its traditional policy of active intervention in its former colonies in Africa. In part, this is a recognition of its straitened military circumstances. It is also a belated acknowledgment of democratic reality.

Unfortunately it seems to be finding it hard to put its principles into practice. Relations with the new military government in Congo (Brazzaville), and the civilian regime of Laurent Kabila in the other Congo (formerly Zaire) provide contrasting case studies.

In the preparations for today's donor conference in Brussels, which seeks to begin the reconstruction of Congo (Zaire), France has been singularly unenthusiastic. Paris's objections seem to have as much to do with diplomatic pique as with concern about human rights. The French government sees the Kabila regime as an Anglophone imposition on former Francophone turf.

On the other hand, France has lost no time in giving its blessing to the military coup in neighbouring Congo (Brazzaville), where the government of President Pascal Lissouba was overthrown by General Denis Sassou-Nguesso, the former leader, after a devastating civil war which left the capital in ruins. No other western government has recognised the regime, and with good reason.

During Gen Sassou-Nguesso's 13 years in power, the country's oil sector flourished. The French oil company Elf helped make it Africa's fourth biggest producer. But corruption thrived under his autocratic rule, and it came as no surprise when he was defeated by Mr Lissouba at the country's first multi-party elections in 1992.

The legitimacy of Mr Lissouba's government, coupled with the need to demonstrate support for democracy in Africa, should be reason enough to shun the general. But the manner of his victory makes it doubly unacceptable, for it was brought about through military force, backed by troops from neighbouring Angola.

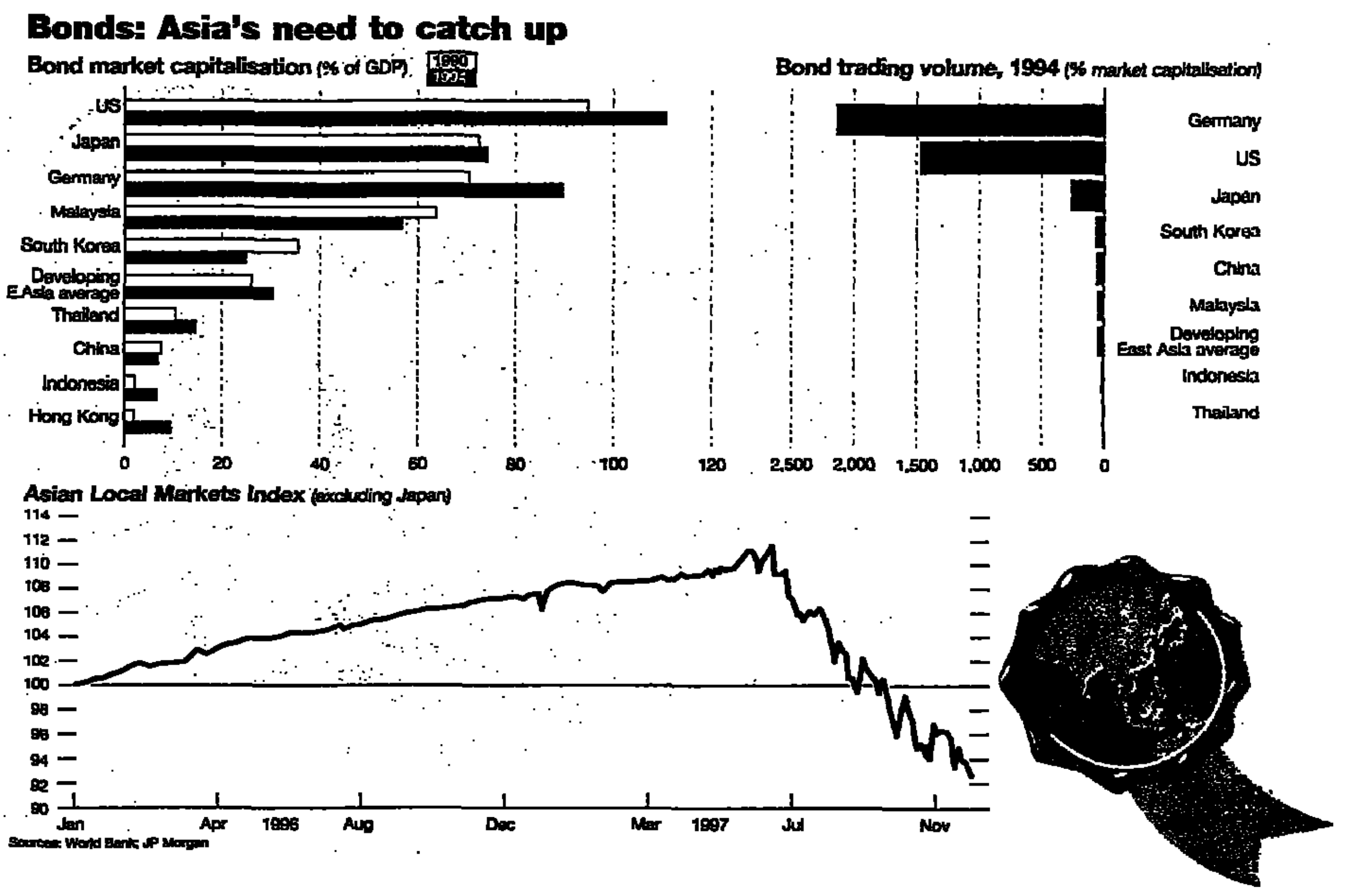
Mr Lissouba claims funding for the operation came from France, and that he is paying the price for his efforts to end Elf's dominance of oil production by encouraging other operators to invest in the sector. The French government needs to demonstrate that such allegations are false, and that its African policies are disinterested and constructive.

Brussels gives France an opportunity to restore its credibility by backing a substantial aid programme for the other Congo. France criticises Mr Kabila's human rights record. But Gen Sassou-Nguesso has quite as much to answer for. Both countries need help, and short-sighted divisions between the donors serve the interests of no one.

Asia's next challenge

More developed bond markets could help emerging markets avoid further turmoil, say **Simon Davies** and **John Ridding**

"What Asia lacks, and Europe and the US have, is a deep, liquid and mature debt market."



Donald Tsang, Hong Kong's financial secretary, was speaking to regional finance ministers yesterday as Asia began to absorb the shocks of the past few weeks. Many observers are starting to realise that a big part of its problem has little to do with overvalued currencies, current account deficits, bank regulation and the rest of the usual suspects. Rather, the region's most urgent financial task is to develop a bond market capable of correcting and offsetting the unchecked power of local banks.

The absence of a mature, well regulated bond market has left banks as the main source of finance for most corporate borrowers, a situation that helped inflate the asset bubble that has now burst so spectacularly. Bigger, better bond markets could have helped allocate Asian savings more efficiently in two ways. They would have given borrowers an alternative source of finance, making the financial system as a whole less dependent on the discretionary decisions of bankers. And it might have provided an early warning that assets were being overpriced.

"Developed bond markets would have created a more balanced financial system in many of these countries and would have helped reduce the impact of the crisis," says Stijn Claessens, principal economist for East Asia and the Pacific Rim at the World Bank.

That message is now sinking in. "In some respects, this [regional crisis] is probably the best thing that could have happened," says Andre Lee, managing director of the fixed income division at Peregrine Investment Holdings in Hong Kong. He believes the crises will force governments to develop bond markets and the institutional supports they require.

At the moment, Asian bond markets are far from trivial, but they do not provide a regular source of capital for corporate borrowers. HSBC Markets estimates that the total value of domestic-currency Asian bonds (excluding Japan) in issue is around US$440bn. In addition, Asian institutions issued just over $200bn of foreign currency bonds.

Judged by the size of the region's economies, however, this is relatively modest. As a share of gross domestic product, the bond market capitalisation was a little over 30 per cent in developing East Asian countries in 1994 (the last available figure). It was then about 120 per cent of American GDP and 90 per cent in Germany.

Much of the domestic bond market that does exist is effectively short-term syndicated loans, whereby the bank syndicate buys the debt and holds it to maturity.

Asian governments have been reasonably happy with this. "The common response to the lack of bond markets was that there was no need, because they were not necessary on the fiscal side [ie, governments did not need to sell bonds], and bank loans were cheap," says Mr Claessens

But the underdevelopment of the bond market contributed to Asia's financial crises. Because there was no alternative, national savings, which are high throughout East Asia, were mobilised by a selected group of banks. These could then be influenced by governments to invest in chosen sectors – from developing a national car (Indonesia) to a national computer industry (Malaysia and South Korea).

As a result, the substantial pool of Asian savings was recycled inefficiently. Without any capital-market rates to compare them with, bank loans could be mis-priced over the long run. One of the consequences was hefty over-investment in the property markets of Bangkok, Kuala Lumpur and Jakarta.

At the same time, the lack of local currency funding through a bond market encouraged excessive reliance by corporate borrowers on short term and foreign-denominated debt. This weakness was inevitably exposed and the international markets forced a series of devaluations around the region.

It need not have been like this. Asia has five of the seven largest foreign currency reserves in the world. But as Kenneth Yeadon, head of Asian Fixed Income at HSBC Markets, argues: "Asia's foreign reserves have funded the fiscal deficits of the G7 nations, and the banking systems of the G7 nations have funded Asian corporates. That must change."

But will it? It might appear that the knee-jerk reaction of many regional governments is to impose restrictions on foreign investment rather than to encourage financial liberalisation. Thailand and Malaysia did this when their currencies first came under attack.

"There are two fundamentally opposing forces," says Oliver Jory, vice-president at Morgan Stanley. "There is the recognition of governments that they should develop capital markets. But the opposing force is the concern about releasing the reins and letting markets control their economies."

Such concerns have not exactly been allayed by the dramatic falls in Asian bond yields that have occured since the crisis began, as investors have accorded an even greater risk premium because of lack of liquidity or proper regulation.

Yet despite all these problems, there are signs that the crisis could act as a catalyst for change. The recent International Monetary Fund package in Korea brought with it a commitment to opening up the Korean bond market to international investors. And the Thai government has taken steps to encourage the development of a mortgage-backed bond market to help banks pass on their exposure to the property sector.

More profound changes are needed. In general, bond markets are fragmented and hampered by a lack of transparency, supportive tax regimes and efficient clearing and settlement systems.

In particular, various changes will have to be implemented.

- There needs to be a proper sovereign yield curve: that is, a government benchmark against which corporate bonds can be priced. This is not well established at the moment because Asian governments had tended to run budget surpluses and therefore have had little need to launch debt programmes.
- The region needs to build up a larger pool of pension funds so that there will be a larger demand for long-term assets to match longer-term pension liabilities.
- Asian companies will have to change their attitudes to bonds. So far, they have been averse to long-term debt. Companies have relied on internal cashflow and equity, followed by bank debt, and only use long-term debt financing as a last resort. They have also been anxious to minimise funding costs, rather than ensure that they built up a debt portfolio to match their investment needs. The result was a proliferation of short-term debt issuance, and therefore much more exposure to the recent rises in short-term interest rates.
- Bond markets need reliable sources of independent information, especially credit ratings. Japan apart, Asia has no established regional credit rating agencies (and even Japan's credit raters have, until recently, remained on the sidelines). Western credit agencies have local offices but their ratings of Asian bonds do not carry the same weight in the markets as their ratings of comparable US or European offerings, which trade at narrower spreads.

None of these problems is insuperable, and the corporate collapses around the region that have followed the recent turmoil will concentrate minds.

Hong Kong has been leading the way, hoping to enhance its position as a regional financial centre. Peter Pang, director of the Hong Kong Monetary Authority, the territory's *de facto* central bank, says: "To broaden the monetary tools available to us and encourage the development of a local bond market, we have established a Hong Kong dollar yield curve."

The government has now issued exchange fund bills (Treasuries) with a maturity of up to 10 years. And it is optimistic that, over time, it can persuade the Chinese government to issue bonds in Hong Kong. "Domestically, Hong Kong is not big enough to create a substantial bond market," says Rafael Hui, the territory's secretary for financial services. "But if we were able to dovetail some of the financing requirements coming from China's five-year plan [to restructure 370,000 state-owned industries], that would represent a quantum leap." Once the market gained critical mass, it would inevitably attract more issuers.

Two recent developments should help. The Hong Kong government recently launched a Mortgage Corporation, which will take mortgages out of the banking system and issue securitised bonds against them. In this way it hopes to jump-start a mortgage-backed bond market. Next year should also see the launch of the Mandatory Provident Fund, a mandatory pension scheme in Hong Kong, which could create substantial demand for fixed-income securities.

The HKMA owns the registered name Asiaclear and is hoping to develop a regional clearing and settlement system through a series of bilateral agreements with countries that have achieved acceptable depositary, clearing and settlement systems. So far, it has approached only Australia and New Zealand, but has had discussions with other regional central banks.

Most of the requirements for a regional market are already in place. There is a big pool of savings, and demand for capital for corporate restructuring, for housing and for infrastructure finance. The World Bank estimates that the latter, alone, will require US$8,000bn between 1994 and 2004 – more than the banking system could provide.

Demand for Asian bonds has naturally been affected by the recent crisis, and it could take time to attract overseas investors back to the region. But so long as liquid and well regulated debt markets develop, the demand will follow, particularly given fast regional growth rates.

"The process does not have to be slow," says Mr Claessens of the World Bank. "Look at the speed with which these countries have put the infrastructure for equities markets in place."

· OBSERVER ·

Tale of tree fellers

■ What to make of the change at the top of Stora, the venerable Swedish forestry group which has been through the mill in recent years? Out goes chief executive Lars-Ake Helgesson, who's been at the top of the tree since 1992. In comes Björn Hägglund, 52, currently head of the forest and timber division.

Helgesson says the decision to go was his alone. He's completed a big restructuring programme after weathering the storm of the early 1990s and, since chairman Bo Berggren is a sprightly 62-year-old, there was no immediate prospect of moving upstairs.

Still, you can't help wondering whether the timing has something to do with the arrival on the scene of Percy Barnevik – the bustling former ABB boss who took over this spring at Investor, the Wallenberg investment company which is Stora's dominant shareholder.

Barnevik, an impatient type, has made little secret of his determination to weed out under-performing businesses. He's already dragging up Saab by its boot straps and Stora – which under Helgesson's leadership lost its mantle as Europe's largest forestry group – is reckoned to be on his hit list. Size isn't everything, but the company whose name means "big" in Swedish has got to make up lost ground.

High flyer

■ Not all is gloom on the Asian business scene. Zhang Jian, China's air conditioning king, has just become the proud owner of the country's first private business jet. The eight-seater Cessna – complete with mini-bar and black leather seats – touched down at Beijing airport last week at the end of its maiden flight. It will soon be ferrying the 34-year-old boss of Broad Air Conditioning across the country in search of custom.

"We imagined having breakfast in Changsha, flying to Shanghai, going on to Hong Kong and being back in Changsha by dinner," says Zhang. Changsha, the capital of the central Hunan province, is headquarters for Zhang's industrial empire. It's also the city where the late Chairman Mao went to school. What would the helmsman make of it all?

Flying pig

■ Gordon Bethune has a way with words. After taking the controls at Continental Airlines in 1994, he charmed jaded workers by telling them that cost-cutting wasn't everything. "You can make a pizza so cheap, nobody will buy it," he said. In London yesterday Bethune again wheeled out some arresting metaphors.

The former naval mechanic isn't a fan of the proposed British Airways-American Airlines alliance, which, he insists, is really a merger. "There's no way you can dress this pig up to be a ballerina. They might try to call it a ballerina, but when you take its dress off it's still a pig," he says.

Bethune plans to tweak BA's curly tail some more. Next stop on his European tour is a Paris meeting with Jean-Cyril Spinetta, chairman of Air France, with which Continental has a partnership. He's taking along Virgin Atlantic boss Richard Branson, BA's arch enemy and another partner, to dine with Spinetta. Should make for lively conversation.

GAN to pieces

■ You've got to hand it to François Heilbronner, chairman of French insurance group GAN between 1986 and 1994. As the debate rages over how many billions of francs were lost during the early 1990s under his leadership, Heilbronner argued in *Le Parisien* yesterday that the fault lay at the state's door.

Heilbronner says that for years he pleaded with the government to take full control of UIC, a disastrous property lending subsidiary; he finally got his way in 1993 – and only then did the ugly truth start to emerge. More intriguing is why Heilbronner didn't resign in protest beforehand, and why he allowed GAN to get in so deep in the first place?

Half-baked

■ The Spanish went out of their way to produce a suitable menu for French president Jacques Chirac at a gala dinner on Monday night in Salamanca, the venerable university city where the two governments were holding a bilateral summit. In this stronghold of robust soups and Castilian roasts, they served crayfish cream with cheese puffs, a vegetable pastry, tenderloin "truffled with potatoes" and a coffee-flavoured desert entitled "Fonseca Symphony" – named after the family palace where the event took place.

The ever-courteous Chirac afterwards said how impressed he was by Salamanca's buildings and remarked that the summit was an "enjoyable" affair. Behind the scenes, senior French officials were less polite about the dinner: "pretentious" and "quite disgusting" were two of their more succulent comments.

Financial Times

100 years ago

Missouri, Kansas and Texas

American criticism of an American railroad, when it comes from a reliable and independent source, is generally refreshing and interesting. This is the case with the Missouri, Kansas and Texas, a company which has just come under the lash of the New York Commercial Advertiser, a journal whose opinions are entitled to respect. A small surplus shown for 1895-96 is converted into a deficit of $285,000. But the company reports "other income" which reduces the deficit to $149,000. There is some little mystery about the "other income," and we want more information about it.

50 years ago

Contracts With U.S. Exporters

There is no truth in reports that all British contracts with American suppliers are to be cut completely at the beginning of 1948, or at any other time. British officials in Washington say that an investigation of the situation showed how difficult it would be to attempt any such cut in commercial contracts. Many of these contain cancellation penalties so great that the saving in dollar exchange through a cut or cancellation would be negligible.

FINANCIAL TIMES
Wednesday December 3 1997

Pakistani PM triumphs as president steps down

By Farhan Bokhari in Islamabad

Pakistan's president Farooq Leghari unexpectedly resigned yesterday after a bitter stand-off with Nawaz Sharif, the prime minister, that has brought the country to the brink of constitutional crisis.

Earlier in a day of dramatic political developments that significantly strengthened the prime minister's position, Sajjad Ali Shah, the combative chief justice of the Supreme Court – whose showdown with Mr Sharif precipitated the crisis – also quit.

Mr Leghari resigned just hours after a meeting with General Jehangir Karamat, the army chief. The army has become increasingly restless at a political slanging match between Mr Sharif and Mr Leghari that had paralysed government business.

Mr Leghari said he was resigning because he opposed government attempts to annul the appointment of Mr Shah, who had initiated contempt of court proceedings against the prime minister. If the action had been upheld, it would have disqualified Mr Sharif as a member of the parliament and forced his resignation.

"I hold certain principles and I hold the constitution above self," Mr Leghari said.

However, his decision followed unconfirmed reports that Mr Sharif's government had decided to begin impeachment proceedings.

Mr Sharif, who was returned to office in February with a two-thirds parliamentary majority, has seen his administration increasingly paralysed by the dispute. Last night he said he did not hold a grudge against anyone, and his priority was economic reform.

"In my heart, and I believe in the heart of all members, there is neither hatred nor anger against anyone, just pain at the events of the past few days," the prime minister said in a televised address.

Analysts said the removal of Mr Leghari and Mr Shah in one bloodless move was a triumph for the prime minister.

Mr Shah's resignation was forced by 10 of the 17 members of the Supreme Court, with whom he was increasingly at odds. His departure will provide breathing space for Mr Sharif from the contempt of court action. Analysts said the action, which was vigorously pursued by Mr Shah, would probably be quietly dropped.

Mr Leghari, a key figure in the opposition Pakistan People's party led by former prime minister Benazir Bhutto, was appointed president by Mrs Bhutto but fell out with her and eventually sacked his former ally.

Last night he defended himself against accusations by members of the ruling Pakistan Muslim League that he had conspired to destabilise Mr Sharif's government. He said: "I had given him what I thought was good advice. But I had never been a conspirator."

Wasim Sajjad, the senate chairman, has taken over as acting president until one is elected by the parliament and provincial legislatures.

Cover from army, Page 4

Investors gamble on chances of earthquake in Tokyo

By Gillian Tett in Tokyo

Japan's financial institutions may have been caught on the hop by the recent failures among their ranks, but they are trying to be better prepared for natural disasters.

Tokio Marine and Fire Insurance, Japan's largest non-life insurer, has just sold $100m in so-called catastrophe bonds. These provide investors with a handsome return unless a specified natural disaster occurs. For the issuer, they pass on part of the risk it faces in the event of such a disaster. In this case, the specified disaster is a large earthquake in the Tokyo region.

Concern about earthquakes has been rising in Japan since a 1995 earthquake in Kobe measuring 7.2 on the Richter scale killed 6,000 people and caused damage costing $20bn. Tokyo's last big earthquake was in 1923, and some scientists suspect another could be due soon. The Japanese government recently estimated that an earthquake in Tokyo measuring 7.2 on the Richter scale would kill 7,200 people and destroy 380,000 homes.

Until now, Japanese insurers have laid off some of the risk of potential earthquake damage claims in the conventional way by tapping the global reinsurance market. But reinsurance deals tend to be short-term and limited, Tokio Marine says. The 10-year catastrophe bond issue, lead-managed by Goldman Sachs and Swiss Re Capital Markets, taps a broader source of medium-term funds.

If there is no disaster, the bonds pay interest at 430 basis points (4.3 percentage points) above Libor, the London inter-bank offered rate. If an earthquake does occur, bondholders give up some capital.

Similar schemes have been launched in the US in relation to earthquake risks in California and hurricane risks on the east coast. The Tokio issue is the first to make the scale of the capital reduction dependent on the intensity of the disaster, rather than the level of damage. If an earthquake between 7.1 and 7.6 on the Richter scale hits the Tokyo, Chiba and Yokohama areas investors lose their money on a sliding scale. Focusing on the Richter scale, rather than damage, makes it easier to measure risk, officials argue. Japanese investors have been wary of the bonds, but western investors have reacted enthusiastically. The US and Europe placement was subscribed four times.

As Tokio Marine points out, although earthquake risk is difficult to measure, it is arguably more stable than the uncertainties sweeping through east Asia.

Opera chiefs ready to defy MPs

Continued from Page 1

utive to replace Genista McIntosh, who held the job for only four months before resigning in May.

The committee's report is expected to be particularly critical about the appointment of Ms Allen by Lord Chadlington, who had been her associate at the Arts Council. It also finds fault with the financial controls in place at Covent Garden, and its failure to find another home during the closure period. The seasons of opera and ballet in rented London theatres have proved financially disappointing.

Lord Chadlington and the trustees feel the criticisms of Ms Allen are particularly unfair. Since her arrival in September the ROH's debts of £7m have been reduced to £5m, and in January a full programme will be announced covering the next two years.

Mr Kaufman is expected to recommend that the ROH should lose its annual subsidy of £15m or that the trustees should resign, along with Mary Allen, and leave the running of the House to Chris Smith, the culture secretary.

In effect both the ROH and the select committee are handing the problem to Mr Smith. He might find it difficult to accept the resignations of the management just two weeks after he asked Sir Richard Eyre, former director of the National Theatre, to chair a committee, containing Ms Allen, that is examining opera provision in London.

Cardoso to speed up Brazilian reforms

By Edward Luce in London and Geoff Dyer in São Paulo

Fernando Henrique Cardoso, president of Brazil, promised investors yesterday his government would step up the pace of reforms in response to the recent turmoil in international financial markets.

Speaking to executives from the Confederation of British Industry in London, Mr Cardoso said: "The cost and the pace of advance may be affected by external circumstances but you may be certain there will be no deviations and no U-turns."

Brazil would also "accelerate" its economic reforms, including plans to privatise the electricity sector and liberalise the oil industry, Mr Cardoso said on the first day of a state visit to the UK.

The Brazilian real has come under strong pressure in the past five weeks in the wake of the currency crisis in south-east Asia. Domestic interest rates rose to more than 40 per cent in October in a successful attempt to stave off the speculative attacks.

Mr Cardoso's comments came as the Brazilian government made further changes to the fiscal package it outlined three weeks ago to win congressional approval for the controversial measures.

The government announced that income tax on domestic fixed-income investments would rise from 15 per cent to 20 per cent. Foreign investors would not be affected.

Government officials said the increased tax on bond investments would compensate for concessions made over the past week and that the total fiscal package was still worth R$20bn ($18bn).

The initial fiscal measures provoked a storm of opposition in Congress led by the Liberal Front party, usually the government's closest ally, which objected to a planned 10 percentage point increase in income tax. As a result, the government has limited the income tax increase to the upper band of taxpayers. The government is expected to reduce the cuts in incentives to the north and north-east that it originally announced.

Economists said the increased tax on fixed-income investments would raise about R$2bn a year, which would more than cover revenue lost from the concessions the government has made. However, the tax could cause the interest rate on domestic government debt to rise, they said.

Gustavo Franco, president of the Brazilian central bank, speaking in London yesterday, said the effect of the recent financial turmoil on Brazil had been exacerbated by the actions of "leveraged offshore mutual funds".

Mr Franco said the international markets had overreacted and had not understood the differences between Latin America and south-east Asia, and the misalignment in asset prices. "You could buy six Brazilian electricity companies for the price of one in Hong Kong," he said.

THE LEX COLUMN

Risky rouble

Raising interest rates to 36 per cent is a dangerous way to shore up the rouble and stabilise government debt markets. The growing premium demanded by holders of rouble-denominated assets shows it is clearly unsustainable. The Russian central bank is haemorrhaging foreign exchange reserves to support its currency. And the yields on short-term government bonds have shot up over 50 per cent from a 17 per cent low earlier this year.

The main factor driving yields higher is the risk of a devaluation after a heavy government borrowing spree. The authorities desperately need to borrow to pay overdue federal wages and reduce dependence on piecemeal privatisations and International Monetary Fund disbursements. The government's hope is that once the rouble is redenominated on January 1 1998, and the currency allowed to float in much broader 30 per cent bands, interest rates will be able to fall.

Nonetheless, short-term measures may have long-term consequences. The higher cost of servicing Russia's substantial public debt will sunder the 1998 budget. Furthermore, with real interest rates now nudging 20 per cent, the chances of the economy's growing sufficiently next year to boost government coffers are shrinking. The government should not believe it will preserve its hard-won credibility simply by defending the rouble until the New Year. Rather than punish the whole economy with high interest rates, it should allow the rouble to find its own value now.

FTSE Eurotop 300 index
965.2 (+2.4)

Russian domestic yield

Bankers Trust

From the decomposing hulk of NatWest Markets, Bankers Trust has picked the juiciest bone. The pan-European equities arm it is buying is profitable, unlike the derivatives operations being snapped up by Deutsche Morgan Grenfell, and a top name in UK equity research and trading. Following the acquisitions of Wolfensohn, an M&A boutique, and Alex. Brown, a US securities house, Bankers Trust has stitched together an international equities and advisory franchise to complement its traditional strength in fixed income markets. And the £129m ($217m) price looks cheap.

The fit with NatWest's operations – with its big, blue-chip clients – is not as good as that between Bankers Trust and Alex. Brown. They both specialise in smaller, high-growth companies, particularly technology stocks. And NatWest's strength is still largely confined to the UK. It will take more money to expand on to the Continent as well as to plug gaps in Asia and Latin America.

Should Bankers Trust even be trying to turn itself into yet another global investment bank? The potential returns are high and it starts with two advantages: an aggressive, trading culture and long international experience. But no commercial bank has yet fully succeeded at such a transformation, not even J.P. Morgan. And Bankers Trust still has a long way to go before it will be able to compete with the bulge bracket firms.

UK savings

The broad thrust of the UK government's new savings scheme is appealing. A single tax-free umbrella for cash, shares and bonds should have greater flexibility than the current mish-mash of special savings vehicles for different asset classes. But the devil is in the detail. The wealthiest citizens will obviously be aggrieved. Not only will many lose the chance to transfer all the savings accumulated under existing schemes into the new Individual Savings Accounts but the limit of £50,000 in a person's entire life will reduce the scheme's attraction as a means of financing house-purchase, school fees and so forth. It ought to be increased.

By contrast, some aspects of the scheme – like the absence of any lock-up period for savings – should be particularly attractive to poorer citizens. People on lowish incomes would probably have been unwilling to lock up for several years what little cash they had. Nevertheless, it is too early to say whether ISAs will achieve the government's plan for boosting savings by the poor – not least because so little has been said about how this new product will be regulated. Simple regulation would make it easier for the savings industry to market ISAs aggressively to reach a broader customer base and keep costs down. The notion that ISAs would be sold at the supermarket might not then be fanciful. But belt-and-braces regulation would probably kill such ideas stone-dead.

London trading

The sudden 35 point dive in the FTSE 100 index in the last two minutes of trading last Friday has exposed weaknesses in London's new automatic order book. Even if this was caused by a deliberate attempt to manipulate the market, more vigorous policing cannot be the complete answer. Though extreme, Friday's price movements are not unique. The fundamental problem is too little liquidity in the order book in the last half hour of the day. A thin book is not only vulnerable to manipulation; its prices can oscillate wildly for other reasons, including simple errors.

If the prices displayed on the book merely recorded trades between consenting adults, there would be no need to worry. The snag is that others use these prices to value their portfolios, judge performance and price derivatives.

The ideal solution would be to boost liquidity at the end of the day. This may happen naturally as traders discover the bargains to be had. But institutional changes are needed too. In particular, the Stock Exchange and Liffe should consider the same opening times. Currently many derivatives-related orders are pulled off the book before the official close because Liffe shuts 20 minutes earlier.

None of this will amount to a quick fix. Hence the ideas that have surfaced of using an average price to determine end-of-day valuations or allowing the Stock Exchange to strike out rogue prices. Neither is appealing as a long-term solution. But sticking plaster is better than risking a re-run of last Friday in thin end-of-year markets when annual valuations are computed.

See additional Lex comment on Royal & Sun Alliance, Page 23

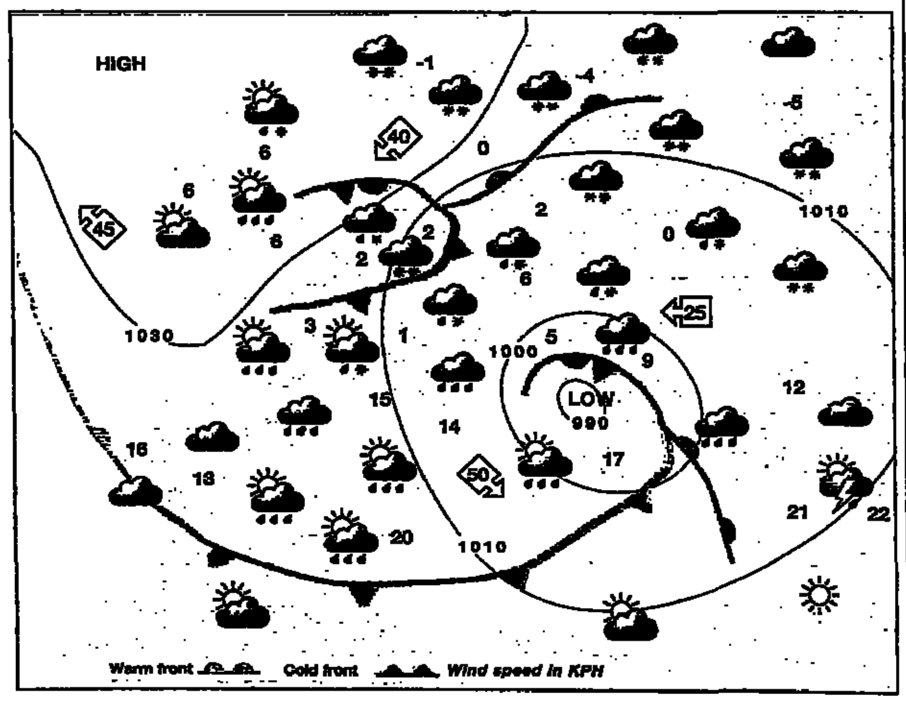
FT WEATHER GUIDE

Europe today

Scandinavia will be very cold, with temperatures remaining below freezing. There will be snow, heaviest in the far north and across the south of Sweden and Finland. The Baltic states and central and eastern Europe will also have snow, but in the west it will turn to sleet. North-western areas will have spells of sunshine.
The Iberian peninsula will be mostly cloudy with a little sunshine in the south and some rain in the north-east.
Showers in the western Mediterranean will become heavier with scattered thunderstorms further east.

Five-day forecast

Scandinavia will have snow. Central and eastern Europe will also have some snow or sleet.
Spain and Portugal will be cloudy with a little sunshine in the south, and the north-east will have rain.
The Mediterranean will have showers, heavy and thundery in the east.



Situation at midday. Temperatures maximum for day. Forecasts by PA WeatherCentre

TODAY'S TEMPERATURES

	Maximum	Beijing	Sun 1	Cardiff	Fair 6	Frankfurt	Snow 1	Madrid	Cloudy 13	Rangoon	Fair 34
	Celsius	Belfast	Fair 6	Casablanca	Fair 21	Geneva	Sleet 2	Majorca	Fair 16	Reykjavik	Shower 4
Abu Dhabi	Sun 26	Belgrade	Rain 9	Chicago	Cloudy 4	Gibraltar	Fair 19	Malta	Shower 18	Rio	Thunder 28
Accra	Fair 31	Berlin	Sleet 2	Cologne	Snow 1	Glasgow	Fair 6	Manchester	Shower 5	Rome	Shower 14
Algiers	Shower 19	Bermuda	Fair 21	Dakar	Sun 29	Hamburg	Fair 2	Manila	Thunder 29	S. Frsco	Rain 14
Amsterdam	Fair 5	Bogota	Thunder 20	Dallas	Sun 18	Helsinki	Snow -4	Melbourne	Sun 21	Seoul	Sun 2
Athens	Shower 17	Bombay	Thunder 33	Delhi	Sun 21	Hong Kong	Cloudy 18	Mexico City	Thunder 24	Singapore	Thunder 32
Atlanta	Shower 18	Brussels	Cloudy 2	Dubai	Sun 28	Honolulu	Shower 26	Miami	Fair 28	Stockholm	Snow 0
B. Aires	Fair 21	Budapest	Rain 5	Dublin	Fair 5	Istanbul	Fair 15	Milan	Shower 8	Strasbourg	Snow 1
B.ham	Shower 4	C.hagen	Sleet 3	Dubrovnik	Thunder 12	Jakarta	Thunder 32	Montreal	Fair -2	Sydney	Sun 23
Bangkok	Fair 35	Cairo	Sun 22	Edinburgh	Shower 6	Jersey	Shower 8	Moscow	Snow -5	Tangier	Fair 19
Barcelona	Fair 14	Caracas	Fair 30	Faro	Fair 18	Johannesburg	Sun 24	Munich	Snow 0	Tel Aviv	Fair 22
						Karachi	Sun 29	Nairobi	Fair 25	Tokyo	Cloudy 13
						Kuwait	Thunder 20	Naples	Rain 14	Toronto	Rain 4
						L. Angeles	Fair 20	Nassau	Sun 28	Vancouver	Fair 10
						Las Palmas	Fair 25	New York	Fair 11	Venice	Shower 11
						Lima	Cloudy 25	Nice	Sun 15	Vienna	Rain 4
						Lisbon	Cloudy 16	Nicosia	Thunder 21	Warsaw	Drzzl 3
						London	Shower 8	Oslo	Fair -1	Washington	Fair 14
						Lux.bourg	Snow -1	Paris	Sleet 2	Wellington	Fair 17
						Lyon	Sleet 2	Perth	Fair 28	Winnipeg	Snow -8
						Madeira	Shower 21	Prague	Snow 1	Zurich	Snow 1

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FINANCIAL TIMES
COMPANIES & MARKETS
Wednesday December 3 1997 — Week 49

INSIDE

Marketing move hits drug groups

Although Glaxo-Wellcome's decision to suspend British marketing of a Japanese diabetes drug may not affect the pharmaceuticals giant, the consequences will be momentous for Sankyo of Japan, the drug's discoverer, and Warner-Lambert of the US, which has US marketing rights. Share prices for both have fallen sharply. Page 18

Softbank falls into the perception gap

Masayoshi Son (left), president of Softbank, the troubled Japanese multimedia group, believes that because Japanese investors treat growth through acquisition less favourably than their US counterparts, his company is undervalued. Softbank's market capitalisation is less than half that of Ziff-Davis, one of its main US arms. He says the investors are unfamiliar with the personal computer and internet sectors and do not understand the high-tech boom. Page 19

Marriage dilemma for True North

A decade of bickering between two of the world's biggest advertising agencies was thought to have ended when True North of the US and Publicis of France agreed separation terms this year. But acrimony has surfaced again following True North's decision to seek a new partner. Page 20

Companies in this issue

Market Statistics — http://www.FT.com

CROSSWORD, Page 28

Chief price changes yesterday

FRANKFURT (DM)			
Rises			
Ava Dol NV Prf	156	+	10
Deutsche Babck	97.35	+	8.35
Villeroy NV Prf	275	+	15
Falls			
Balcke-Durr	245	–	13
Krones NV Prf	566	–	31
Mineralbr Uber	840	–	50
NEW YORK ($)			
Rises			
Blyth Inds	27¾	+	2
Linens N Things	36¼	+	2¼
Total Sys Svcs	29¼	+	2½
Falls			
Cabletron Sys	16¾	–	6⅜
Tandy Inds	48½	–	3¾
Wstn Digital	19¾	–	1¼
LONDON (Pence)			
Rises			
Arcolectric	73½	+	13½
Chieftain	75	+	17½
Highams Sys	135	+	15
Merrydown	65½	+	15
Falls			
Dorling Kindr	220	–	27½
Leslie Wise	19	–	5
TORONTO (C$)			
Rises			
Crestar Energy	23.1	+	1.8
Major Drilling	24.65	+	2.15
Prudent Steel	14.45	+	1.15
Falls			
Boardwalk Equ	16.25	–	1.25
CT Financial	32.00	–	2.75
Inco	27.25	–	1.50
PARIS (FFr)			
Rises			
Salica Stcmt	100.2	+	9.2
Finalens (ex)	294	+	36.5
Skis Rossignol	116.0	+	10.7
Falls			
Arkomeri-Prx	1466	–	164
Cie Engrenages	276.2	–	29.7
Dab Lemolie	325.2	–	94.8
TOKYO (Yen)			
Rises			
Daiki Eng	210	+	39
Kokoku Steel	126	+	30
Yamatane Secs	110	+	23
Falls			
Kiyo Bank	270	–	65
Snow Brand	440	–	90
Takefuji	260	–	65
HONG KONG (HK$)			
Rises			
Bank of E Asia	18.15	+	1.40
China Res Ent	18.05	+	1.60
HSBC Hold (5)	201.0	+	10.5
Hang Seng Bank	78.25	+	5.00
Shanghai Ind	27.2	+	3.1
Swire Pac A	43.0	+	3.4
BANGKOK (Baht)			
Rises			
PCM Precast	18.25	+	3.75
Pranda Jewelry	11.75	+	2.88
Falls			
Hand Thai	17.5	–	7.5
Taikthorn Tirby	21	–	9
Rockworth Pub	39.25	–	16.75
Thaining Pub	40.75	–	17.25

New York and Toronto prices at 12:30.

Ericsson plans to cut 10,000 jobs

Overhaul of Infocom division to accelerate

By Tim Burt in Stockholm

Ericsson, the Swedish telecommunications group, plans to cut up to 10,000 jobs in its public switching and fixed network business as part of a wide-ranging restructuring.

The company, one of the world's largest manufacturers of mobile phones, said yesterday the job losses were part of an ongoing reorganisation in its Infocom division.

In the past two years, more than 10,000 jobs have already been shed at Infocom, which manufactures data communications systems and infrastructure equipment for public telephone networks.

Ericsson said it had decided to accelerate the overhaul at Infocom after seeing profits squeezed by deregulation of European telecommunications and increasing competition.

"Margins and prices have been adversely affected by weakening demand in public switching systems," the company said.

Analysts predicted that further restructuring at Infocom could prompt similar moves by Alcatel of France and Siemens of Germany, Europe's two largest manufacturers of public switching systems.

"These companies are facing lean times because much of western Europe's infrastructure spending has been completed and the market is shrinking," said one analyst.

Another London-based broker warned that investment in new switching systems in eastern Europe and Russia would not make up for the slowing demand among operators such as Deutsche Telekom or France Telecom.

Ericsson said Infocom remained one of its core divisions and that the restructuring did not signal any plans to withdraw from the sector. It added that the plan would not affect its mobile telephone or mobile systems businesses, which have grown rapidly in recent years and account for the bulk of group profits.

Growth in those areas has increased Ericsson's worldwide workforce to about 100,000 over the past two years – in spite of the job losses at Infocom.

The company declined to specify where most of the job losses would occur or when it would seek redundancies.

Nevertheless, it said that the restructuring was unlikely to lead to large exceptional charges against profits, which rose from SKr6.28bn to SKr10.33bn ($1.3bn) in the first nine months of this year. Infocom accounted for about a third of the group's SKr112.6bn sales during the period, although the company did not reveal its profit contribution.

"Profitability is unsatisfactory and we plan to correct that," an official added.

Among the options being considered for Infocom are further outsourcing of component manufacturing and a review of research and development expenditure.

Ericsson's most commonly traded B shares fell SKr8.5 to SKr317.

Patriot to pay $1.3bn for hotels group

By Richard Waters in New York

Patriot American, one of a new breed of acquisitive hotel companies in the US, yesterday pulled off its third big takeover this year with the $1.3bn purchase of Interstate Hotels, the country's largest independent hotel management company.

Along with Starwood Lodging, which recently won a takeover battle with Hilton Hotels for ITT, Patriot is one of a small number of real estate companies with a tax structure that gives them an edge in making acquisitions.

Patriot assumed its privileged tax standing this year through the purchase of California Jockey Club, one of only four American companies which are classed as so-called "paired share" real estate investment trusts (REITs). Paul Nussbaum, Patriot's chairman, said at the time he planned to use the new standing to launch a number of acquisitions.

The purchase of Interstate, which follows the $1bn agreement to buy Wyndham Hotels and a $500m deal for Carnival Hotels, will propel Patriot into a leading position among US hotel companies.

Interstate's portfolio of 222 owned, leased and managed hotels, with 45,000 rooms, would boost Patriot's portfolio of 80 mostly company-owned hotels with 20,000 rooms.

The tax position of "paired share" companies prompted rumblings in Congress after Starwood's intervention as a white knight in the struggle between ITT and Hilton.

By dividing the ownership and management of real estate into separate, twinned companies, these entities are largely sheltered from corporation tax while having all the operating benefits of fully integrated real estate companies – a status that critics say gives them an unfair advantage.

The ability to create such companies was ended in 1984.

Mr Nussbaum said he was confident there would not be legislative action to end the paired share structure, and that his company's bid for Interstate had succeeded largely on its merits rather than his company's ability to pay a higher price.

Patriot said it would pay $37.50 a share for Interstate, with 40 per cent in cash and the rest in stock. It will also assume $785m in debt.

Profits warning by Cabletron hits rival shares

By Nicholas Denton in San Francisco

Cabletron Systems, one of the top four networking equipment makers, said yesterday its earnings would fall far short of expectations in its third quarter, hitting shares across the sector.

It projected earnings of 8-12 cents a share compared with the 39 cent average forecast by analysts polled by First Call. Revenues are expected to decline to $330m-$340m, from $361m a year ago.

Cabletron shares collapsed in New York yesterday morning, falling 6\frac{5}{16}$, or 28 per cent, on Monday's close to $16¾ around midday. They have fallen 65 per cent since May.

The announcement dragged down the company's main competitors, Cisco Systems, 3Com and Bay Networks, by 2-5 per cent in a sector which had been growing fast on the back of the spread of data networks.

Cisco, the largest company in the sector, with a market capitalisation of $59bn, fell in spite of a buy recommendation from Merrill Lynch, the investment bank.

Earlier this year, Cabletron cited soft European sales, but this time it blamed delayed federal government purchasing decisions and weakness in other parts of its US market. It said it needed a "better alignment of its business strategy with its market focus".

A charge of $25m-$30m to pay for this reorganisation, which may involve both acquisitions and write-offs of existing assets, will depress earnings in the fourth quarter.

Beyond this, the company would not explain the deterioration.

One factor the company did not mention was the shift in customer demand from hubs, traffic-directing devices that Cabletron produces, to switches, which direct data more rapidly.

Other networking equipment companies whose share prices have fallen in the past six months include 3Com and Ascend Communications.

Cisco Systems has turned in impeccable results, and a new switch has underpinned a recovery at Bay Networks. 3Com is also well positioned, with equipment that allows high-speed connections to the internet over cable television systems.

However, three factors hold back the industry: a slowing in revenue growth rates that typically ran at 30-50 per cent; costs arising from acquisitions; and, among the networking conglomerates that result from these deals, more direct competition.

Although Cabletron has historically eschewed big purchases, last month it said it would acquire Digital Equipment's networking business in a deal worth $430m.

Alex Trotman (left), board chairman at Ford Motors, and Sun Min, chairman of Jiangling Motors, yesterday launched the 12-passenger 'China Transit' at the assembly line in Nanchang — Reuters

Mobile bid by HK Telecom

Carrier seeks to buy Pacific Link

By Louise Lucas in Hong Kong

Hongkong Telecom, the territory's dominant carrier, is seeking to buy Hong Kong's fourth biggest mobile telephone operator, Pacific Link Communications, the companies said yesterday.

The move signals the start of a widely expected consolidation in Hong Kong's mobile telephone sector, where one in five of the population of 6m has a mobile. Since July, there have been 11 networks servicing the territory, and successive price wars have eroded profitability.

Hongkong Telecom said its cellular arm, Hong Kong Telecom CSL, was in negotiations to buy all the issued share capital of Pacific Link, which is 65 per cent owned by First Pacific, the Asian conglomerate. The balance is held by Vodafone of the UK.

Analysts say the purchase could cost between HK$6bn and HK$8bn ($1.03bn), although many assume this is an asking price and that Hongkong Telecom will be able to drive it lower. More conservative analysts put the price tag nearer to half those figures.

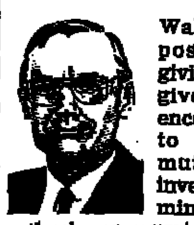
Either way it should not stretch the resources of Hongkong Telecom, which last month said it had a cash pile of HK$15bn. The company's efforts to invest in China have yet to bear fruit and Linus Cheung, chief executive, signalled that its focus would shift to regional deals while waiting for mainland opportunities.

Buying Pacific Link, which has two Hong Kong networks, gives Hongkong Telecom a possible platform to build a CDMA network, the mobile technology China is expected to adopt.

The two networks have a combined subscriber base of 265,000, almost all on the original network. The second, launched in July, is a personal communications service (PCS). Hongkong Telecom, which has 515,000 subscribers, failed in its bid to secure a PCS licence when the government invited submissions last year.

Barry Riley

Mutual funds widen their options for 1998



Wall Street's post-Thanksgiving rally has given further encouragement to loyal US mutual fund investors determined to view setbacks as opportunities.

Nevertheless, it looks as though the phenomenal surge in equity mutual fund net sales since 1994 is tailing off. Industry reports suggest November's sales were quite weak, while October's official net inflow has been revised [illegible] to $16.3bn from the pre[illegible]nary $21bn estimate. After 10 months, cumulative sales had reached $200bn, but it now looks uncertain that the 1996 record full-year total of $224bn will be exceeded.

Mutual fund bosses seem to be approaching 1998 with some caution. "There will be a substantial reduction in growth compared with the past three years," says Lawrence Lasser, chief executive officer of Putnam. Nevertheless, he adds, business has remained very stable over the past two months, with a positive cash-flow every single day.

Michael Laughlin, the chairman of Alliance Fund Distributors, also expects a slowdown for the industry, although Alliance hopes to increase its market share. Like Putnam, Alliance sells only through intermediaries and mutual fund folklore says intermediated business is more stable than the direct sales sector.

"An adviser is more valuable in tough times," says Mr Lasser. Mark Casady, the director of mutual funds at Scudder, Stevens & Clark, sees both sides of this debate. Scudder's no-load business was growing fast up to 1995, but now the load side is proving more consistent. "1998 should be almost as good as 1997," he says.

But sales patterns in 1998 may be different. This year, the sheer strength of the US equity market has dominated everything. One of the industry's few problems has been that almost all the active funds have lagged behind the index-trackers.

For next year, however, the buzz phrase appears to be "non-correlated". Fund promoters are wheeling out alternative products which could perform in a more complex, and possibly difficult, market environment. Scudder, for instance, is launching a no-load, high yield bond fund yielding more than 10 per cent. Mr Laughlin also mentions real estate, and in equities a new emphasis on small capitalisation funds.

Fund promoters are wheeling out products that could perform in a more complex environment

Sales of bond funds have begun to recover after years in the doldrums. They have suffered only one negative month in 1997, and cumulative net inflows have reached $28bn after 10 months. US buyers have been crowded out of the domestic bond market by foreign investors, including central banks. But as the latter begin to dispose of their accumulated hoard (they have sold $30bn of US Treasuries in three months), the bond fund revival could accelerate.

But it depends on perceptions of what a pension fund should look like. Mr Lasser feels most mutual fund investors are planning for retirement. "Eighty per cent of our business is retirement-oriented one way or another," he says.

The long and increasingly powerful bull market of the 1990s has enhanced the status of equities as long-term investments. This has been a wonderful development for the mutual fund industry, which enjoys much fatter margins on equity funds. It also benefits from stability as the funds are locked away in "baby boomer" retirement plans, although it is not known how the accounts will perform in difficult market conditions.

An important feature of 1997 has been that although total equity fund inflows have been steady there has been an underlying risk aversion. International funds have suffered heavy redemptions in the past couple of months. Net inflows to the "aggressive growth" sector slipped to $4bn in October from $5.8bn in September, while demand for "growth and income" funds rose from $7bn to $7.6bn.

The mutual fund industry, which has become the engine-room of the US stock market, is changing gear, but has not yet slammed on the brakes.

Advisers aim to sell Yamaichi assets by year-end

By Gillian Tett in Tokyo

The assets of Yamaichi, Japan's fourth-largest broker, which collapsed last week, could be sold within the month, officials said yesterday.

"We are hoping to conclude the transactions this month," said Philip Dunne, managing director of DLJ Phoenix, the London corporate finance adviser which was appointed last week to manage the sale. It is the first time a western advisory group has had this role in Japan's financial sector.

Mr Dunne added that there had already been strong interest from Japanese and other groups in Yamaichi's fund management arm, International Capital Management.

In addition to this, there had been "initial expressions of interest" in the domestic brokerage business. Though the government has priced Yamaichi's assets at Y3,609bn ($27.9bn), its share price yesterday closed at Y2, compared with a high of Y525 in January and a peak of Y3,130 in 1987.

"This is an unprecedented opportunity for a foreign group interested in developing a domestic broking business in Japan," Mr Dunne said.

DLJ Phoenix is hoping to arrange a single buyer for all Yamaichi's assets, and will give priority to any such offers, he added. However, western bankers warn that finding a single buyer could prove difficult. Though some parts of the operations are considered attractive, the domestic brokerage unit is regarded by some as overstaffed and inefficient.

As one western banker said: "Yamaichi used to have a good reputation and it certainly has good reach, but you have to ask how the events have affected its reputation among the public."

A further concern is Yamaichi's balance sheet. The ministry of finance said last week that Yamaichi's assets were Y101bn greater than its liabilities, which include Y260bn of hidden, off-balance sheet *tobashi* losses (those shuffled between accounts).

However, government officials yesterday admitted that the company might still be found to be insolvent when the operations are wound down. The assets are shrinking as customers rush to withdraw funds.

Another problem is that the company's trading positions on the market could take time to unwind – potentially exposing it to more losses if the market moves adversely. A third fear is that more *tobashi* losses might emerge.

Given these problems, Yamaichi's closure will probably be conducted through a sale of its assets rather than through a sale of the entire company through its equity, officials say.

Meanwhile, Daiwa Securities, Japan's second-largest broker, has said it would take the unprecedented step of cancelling some Y120bn worth of *tokkin* accounts. These are accounts in which companies have traditionally placed surplus cash which is then traded on the markets. Although many brokerages have recently reduced their *tokkin* accounts, Yamaichi and Daiwa have increased them, prompting market speculation that Daiwa was also holding *tobashi* losses.

Daiwa has denied this, saying it cancelled these accounts to show that it did not have *tobashi* losses.

Japan's three other big brokers – Daiwa, Nikko and Nomura – yesterday said that they were considering taking on some of the staff at the failed Yamaichi group, writes Gillian Tett.

Several other groups have already indicated that they might take some employees. The number of staff at the brokerage and its affiliates was about 9,500, or almost one-tenth of the Japanese brokerage industry.

Universal Securities and Tokai Maruman, two medium-sized brokers, have offered to accept 300 and 50 staff, respectively. The Japanese unit of American Family Life Assurance, a US insurance group, has also offered to accept 500. Meanwhile EDS, the US computer group, said on Monday it was negotiating to take on 600 staff from Yamaichi's information technology unit.

Banking analysts said many of these pledges had yet to be turned into firm offers. Company officials themselves admitted that finding jobs for all the staff could prove difficult.

Drugs groups suffer from withdrawal symptoms

Glaxo Wellcome's decision to suspend UK marketing of a Japanese diabetes drug may be of minor importance for the UK pharmaceuticals group, but for Sankyo of Japan and Warner-Lambert of the US, the consequences are momentous.

Shares in Warner-Lambert, which has the right to market the medicine in the US, fell more than 18 per cent on Monday after Glaxo Wellcome made its statement. The news broke in London after Tokyo had closed, but yesterday shares in Sankyo, the drug's discoverer, fell as far as they were permitted to, down Y500 – or 12.3 per cent – to Y3,550.

The reason for the sharp declines is that the drug, known as Noscal in Japan and Rezulin in the US, is critical to the long-term prospects of Sankyo and Warner-Lambert. Although the two companies have not withdrawn the product from their respective domestic markets, there is no doubt that the decision by Glaxo Wellcome to halt marketing because of safety concerns will slow sales growth.

Moreover, there remains a risk that the ministry of health and welfare in Tokyo and the Food and Drug Administration in Washington may insist on its withdrawal.

Glaxo Wellcome voluntarily suspended sales of the product after seeing data showing serious side-effects on liver function in 147 of 370,000 patients treated with the drug over three months. The drug is thought to have caused three deaths. Last month, Glaxo Wellcome and Warner-Lambert wrote to doctors warning them of potential liver complications. The drug is used in patients with type two diabetes, which is not adequately controlled by insulin.

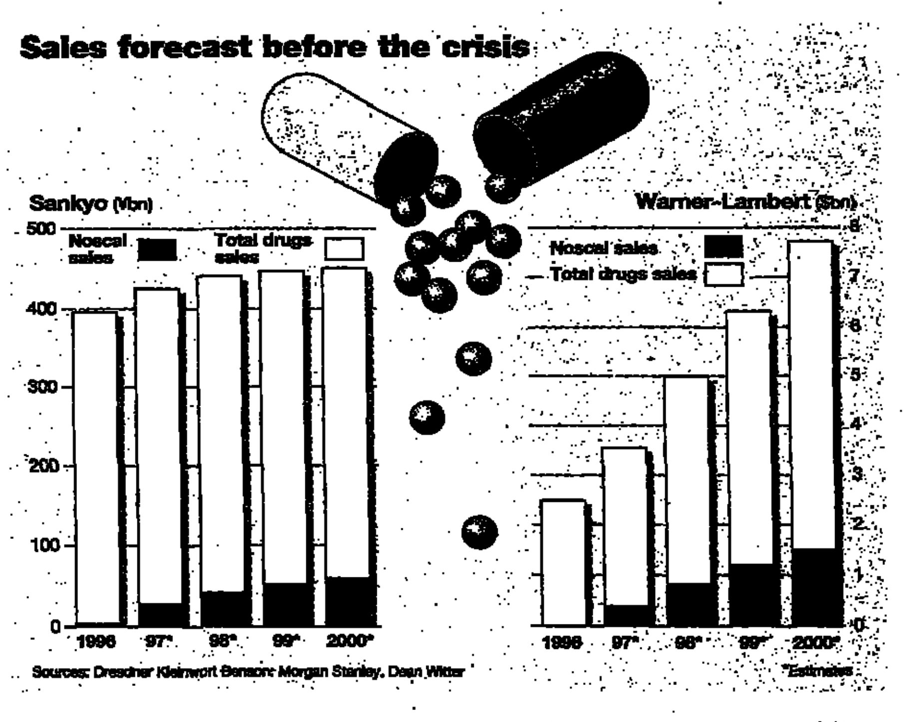
Warner-Lambert has attempted to limit the damage. "We clearly disagree with their [Glaxo Wellcome's] evaluation of the adverse events," it said. The group insisted 200,000 people in Japan and 600,000 in the US had taken the drug, and there had been only a handful of significant side-effect cases. Sankyo said it expected Glaxo Wellcome would eventually resume marketing in the UK and try to have the drug licensed in other European countries.

Analysts estimated Glaxo Wellcome's sales of the drug would be just £270m ($450m) in 2000. Last year, its turnover was £8.34bn. The group claimed the suspension would not make any material difference to its expectations for 1998 and 1999.

In contrast, the product is highly significant for Warner-Lambert. The US launch of Rezulin last March was a great success, generating prescription volumes far ahead of forecasts. Before this week's events, analysts were predicting sales for the medicine of $402m this year. By 2000, brokers Morgan Stanley had forecast US sales as high as $1.5bn. Last year the group's total drug sales were $2.5bn.

For Sankyo, Japan's second largest pharmaceuticals company, Noscal is critical. "It is really important this product succeeds," says Muneyuki Sakai, drugs analyst at SBC Warburg in Tokyo. "It is the key to the company's growth." Before Glaxo Wellcome's announcement, Mitsuo Ohmi, pharmaceuticals analyst at Dresdner Kleinwort Benson, had expected the drug to become Sankyo's second most important medicine, generating sales and royalties of Y60bn ($468m) by 2000. Last year, the group's total drugs sales were Y396bn.

Sales forecast before the crisis



Sources: Dresdner Kleinwort Benson; Morgan Stanley, Dean Witter *Estimates

The Japanese company is already under immense pressure. Domestic sales of its top-selling drug, a cholesterol treatment called Mevalotin, have been stalling. In the US, where the medicine is marketed by Bristol-Myers Squibb as Pravachol, sales are set to peak next year, ironically because of the launch of a new Warner-Lambert competitor, Lipitor.

Sankyo seems to have nothing of Noscal's potential to replace it. Without European sales of Noscal, Mr Ohmi does not expect Sankyo to achieve any sales or profits growth before 2000. Indeed, next year the company's earnings would fall. He had previously forecast that the group's consolidated net profits would rise from Y56.4bn this year to Y62bn in 1998.

If the drug has to be withdrawn from the US it would be a double blow for Sankyo. Not only would the company lose revenues, but its international ambitions would be severely set back. The group has the right to buy out Warner-Lambert from their joint venture. This could provide a platform for marketing other Sankyo products in the world's largest market. Without Noscal sales, the joint venture would be stillborn.

For Warner-Lambert, the problems are bad but not disastrous. Even without Noscal, the company is expected to expand. Morgan Stanley estimates Lipitor, launched only this year, should have sales of $1.1bn by 2000. But the group is unlikely to remain on the list of companies with the highest prospective growth rates.

As for Sankyo, after outperforming the Japanese market by 100 per cent since January last year, the drugs maker looks set for a significant derating.

Paul Abrahams

Fuji Photo to lift China output

By Michiyo Nakamoto in Tokyo

Fuji Photo Film will next year quadruple output of cameras in China for export, in an attempt to strengthen its position in the expanding global market for digital and advanced photo system cameras.

Fuji also believes that an increase in production could improve its chances of winning marketing rights in the promising Chinese market. The Japanese maker of photographic film and equipment does not yet have a license to sell its cameras in the Chinese market, which it expects to grow steadily in next the years.

The company, which has been aggressively expanding its overseas business, will increase annual output at its plant in Suzhou from about 250,000 units to about 1m units.

Fuji already makes digital and instant cameras in China, and will add production of APS cameras – small cameras developed by a consortium of camera and film makers which are easier to load than conventional 35mm equipment.

All cameras produced in China will be destined for Japan and other markets including the US and Europe.

Fuji's decision to produce more cameras in China highlights the country's growing importance as a low-cost production base and a promising future market. The company has a strong presence in Asia outside Japan, where its share of the photographic film market is about 50 per cent, according to Toshihiko Ginbayashi, industry analyst at Morgan Stanley in Tokyo.

The move also reflects the Japanese company's interest in expanding its share of new markets for APS and digital cameras. In the past few months APS cameras have taken about 40 per cent of the total market in Japan, Fuji says.

This growth in APS sales is also helping Fuji regain share in the photographic film market in Japan. The company forecasts that APS film, which already accounts for about 15 per cent of Japanese film sales, will take half the market in five years.

APS cameras already make up 80 per cent of Fuji's total camera production. The company, which manufactures APS cameras in Indonesia rather than Japan, says it has decided to increase output in China in part to hedge the risk of concentrating production in one country.

Fokker creditors to meet receivers today

By Gordon Cramb in Amsterdam

Creditors of Fokker may receive only a fraction of the Fl 26bn ($13bn) in claims against the collapsed Dutch aircraft maker. Only Fl 1bn is so far available to pay out.

Some 2,100 claimants will be represented today at the start at a two-day meeting with receivers in Amsterdam, convened by the district court.

In addition, 5,800 staff who lost their jobs in the Netherlands' biggest bankruptcy can press their claims on the company, as can holders of Fl 1.62bn in bonds.

Unsubordinated bonds issued by Fokker are trading as high as 31-34 per cent of face value, having fallen beneath 5 per cent since the collapse early last year.

But Jeff Summers, of Klesch & Company, the London-based specialist in distressed debt, warned yesterday: "I can see little reason to get over-enthusiastic about the level of recoveries. Claims have escalated dramatically."

He said the potential recovery range remained wide, from 6 per cent to as much as 54 per cent "if everything went in [the creditors'] favour".

Recent indications by the administrators suggested otherwise, however.

The staff, owed some Fl 50m in accrued holiday pay, are at the head of the queue. They account for nearly all the Fl 56m so far acknowledged as due to preferential creditors, who are to get their money in the first quarter of next year.

No timetable has yet been set for the resolution of other claims, including those by the Dutch state – which provided repeated cash injections before it and Dasa, the unit of Germany's Daimler Benz which owned a controlling stake, let Fokker fail. Dasa and component suppliers are also on the list.

"A lot has been solved but some problems remain" in settling the claims of the suppliers, according to Ben Knüppe, one of the receivers.

However, he stressed that among those least likely to see their demands acknowledged were airlines operating the more than 1,000 Fokker aircraft in use worldwide.

Although the carriers might be justified in saying that their assets had lost value through the collapse of the manufacturer, "that cannot be dealt with in a bankruptcy", Mr Knüppe said.

He hoped the meeting would allow the 240 contested claims to come down by about 75.

The remainder would enter a disputes procedure which, under Dutch law, could take as long as eight years to settle. Mr Knüppe pointed out, however, that reaching the present stage in little over 18 months meant the receivers were ahead of the usual schedule.

The Fl 26bn in claims would be "brought back to more reasonable proportions in the coming months, but even Fl 10bn I find still a rather high amount," he said.

At the same time, some assets such as property remained to be sold, meaning that the cash position should rise.

The receivers' biggest success came when Stork, a local industrial services group, last year bought Fokker's profitable maintenance division for Fl 302.5m.

South Korean, Malaysian and Russian companies were among those who explored a possible takeover of the manufacturing side, but no deal emerged.

Jaap Rosen Jacobson, a Dutch businessman, is still seeking to revive assembly of its F70 and F100 jets after buying some of the necessary equipment from the receivers. But he would need the co-operation of others, including Stork, and a new supplier of wings – Short Brothers, of Northern Ireland, has dismantled its production line.

German group attributes profits rise to focus on core activities

Degussa ahead 27% in year

By Andrew Fisher in Frankfurt

Degussa, the German chemicals, metals and healthcare company, raised pre-tax profits 27 per cent to DM523m ($294m) in the year to September 30 and forecast a further improvement in 1997-98.

The company said it benefited from its focus on core activities – speciality chemicals, health and nutrition, and precious metals – and its growing globalisation.

Turnover was 11 per cent higher at DM15.3bn.

The dividend is increased from DM1.30 to DM1.50 a share, with a bonus of 10 pfennigs to mark Degussa's 125th anniversary next year.

Earnings per share rose from DM3.90 to DM4.40.

The company said its positive performance had continued into the current financial year. Chemical products, health and nutrition, precious metals and banking had all made a strong start.

Degussa expects a stable economy in the US and increased growth in Europe. "With unchanged favourable global economic conditions, we anticipate further earnings improvements in the new fiscal year."

The overseas share of sales reached 78 per cent last year. The company recently bought Ney Dental International – a US dental products company with sales of $45m – and plans to acquire the hydrogen peroxide businesses of DuPont, which has production sites in the US, Canada and New Zealand.

Degussa said sales of chemical products rose 13 per cent last year to DM4.3bn, and that earnings in the division also improved.

Turnover in health and nutrition activities rose 14 per cent to DM3.1bn. Earnings were also higher, despite the impact of German health reforms on Asta Medica, the pharmaceuticals operation.

Restructuring led to a profits recovery in precious metals and banking, with sales in the sector 9 per cent higher at DM7.9bn. The rise was only 2 per cent when adjusted for precious metals trading and structural changes.

● **Siemens, the German electronics group, and Newbridge Networks, the Canadian communications company, said yesterday they had bought RADNet, an Israeli communications company, for US$75m, writes Avi Machlis in Jerusalem.**

Siemens said it purchased RADNet to bolster its research and development team and to add the company's access switches for asynchronous transfer mode computer networks to its product line.

After the deal, Siemens will own 50.1 per cent of RADNet, while Newbridge will own 49.9 per cent.

Siemens already has partnerships with several Israeli companies, a DM20m venture capital fund in Tel Aviv and sales and support revenues of DM300m a year in the Israeli market.

RADNet was established in 1994 as part of the Rad Group of 14 technology companies specialising in computer networking.

Malaysian pulls out of Danyard deal

By Hilary Barnes in Copenhagen

The turmoil on the Malaysian stock market has forced Dato Amin Shah, the Malaysian businessman, to pull out of an agreement to buy a 48 per cent stake in Danyard, Denmark's second largest shipyard.

The failure of the deal with Mr Amin Shah again threw into doubt the future of the shipyard which employs about 1,500 people in the north-east Jutland town of Frederikshavn.

The owner, Lauritzen Holding, said in 1996 that it was not prepared to place any more capital in the loss-making yard.

Michael Christiansen, chairman, said yesterday that the yard would close when its present order book was completed at the end of 1999, unless a strategic partner was found who was prepared to invest in it.

Mr Amin Shah agreed in 1996 to pay $100m for 48 per cent of Danyard, which has valuable experience in plastic-hulled naval patrol vessels.

Mr Christiansen said Danyard's failure to win an order for six ocean-going patrol vessels from the Malaysian government last summer altered the assumptions on which the agreement with Mr Amin Sah had been made.

It meant that Danyard was unable to negotiate a deal by which the cost of Mr Amin Shah's investment in Danyard was reduced.

Mr Amin Shah had planned to finance the acquisition of the stake in Danyard with a share issue in Malaysia.

"It is obvious that it is difficult for him under the present circumstances," Mr Christiansen said.

Danyard is presently completing an order for nine advanced chemical tankers for Stolt Nielsen Partners, part of an American-Norwegian group. Five have been delivered, but losses on the vessels have been enormous. The yard hopes the final ships in the series will be profitable.

Danyard made a DKr490m ($72.4m) loss in 1995 and DKr1.08bn in 1996. First-half losses this year were DKr158m. The group's shares rose yesterday DKr12.10 to close at DKr610.

A positive result would be reported for this year, said Mr Christiansen, and would include about DKr250m received as a consequence of a decision to dissolve the Danish War Insurance Fund for shipping.

Softbank falls into the perception gap

Multimedia group says it suffers from Japanese investors' dislike of growth through acquisition

"It is ridiculous," declares Masayoshi Son, president of Softbank, the troubled Japanese multimedia conglomerate.

His complaint is that the group's market capitalisation is less than the estimated worth of Ziff-Davis, one of its main US subsidiaries. This remains the case in spite of a rebound in Softbank's market capitalisation from a low of less than Y205bn last week to Y317.5bn ($2.4bn) yesterday.

The discrepancy in part reflects controversy surrounding a perceived lack of transparency in Softbank's accounting practices, prompted this summer by an apparently well-informed book by an anonymous former employee.

But there is a deeper reason. About three-quarters of Softbank's revenues come from the US technology sector, but the group is valued as if it were a Japanese conglomerate.

"There is a gap between our business and the way an investor in Japan looks at it," says Eric Hippeau, chairman and chief executive of Ziff-Davis.

"Rapidly, you are getting to the point where the companies are worth more than twice as much as the group in Japan."

Softbank has an "enterprise value" of about $3.6bn, adding its net borrowings to the $1.6bn value of its equity. Its businesses include Ziff-Davis, which dominates the computer magazine market with publications such as PC Magazine and runs Comdex in Las Vegas, the world's biggest computer fair.

Although it faces new competitors in the online technology news sites published by companies such as CNET (and the largest internet trade shows are put on not by Comdex but rival Mecklermedia), Ziff-Davis has earnings before interest, tax, depreciation and amortisation – a favoured measure closely related to cash flow – of about $300m.

An earnings multiple of 11 to 15, typical for media businesses in the US, gives it an enterprise value of about $4bn.

The group's three other main holdings – the Japanese publishing and distribution business, memory packager Kingston Technology, and a 37 per cent stake in the internet navigation service Yahoo! – are estimated to be worth a further $4bn.

Masayoshi Son: Japan does not understand high-tech boom

The problem is that Japanese analysts and investors treat acquisitions less favourably than their US counterparts. For instance, when Yahoo! acquired Four11, the internet email service and directory, its share price jumped – but Softbank's fell.

Japanese analysts focus on net profit, a measure which suffers when acquirers write off the cost of an acquisition, rather than cash flow, which ignores changes to the balance sheet as a result of such a deal.

So the $107m investment in Yahoo! in 1996, which now has a value of about $700m, is reflected in Softbank's results as a charge to profits of about $15m a year.

"Acquisitions are considered bad in Japan, so no credit is given to this great investment," says Mr Hippeau.

Japanese investors value fast-growing, high-tech businesses far more conservatively than their US counterparts. In part this is because the Japanese PC market is depressed and investors extrapolate from their own domestic experience with that industry.

Mr Son has a harsher complaint: that Japanese investors and commentators, unfamiliar with the personal computer and internet industries, lack understanding of the high-tech boom.

But if Mr Son is disgruntled with the Japanese market, why not seek more appreciative investors in the US?

Indeed, Softbank is understood to be considering an initial public offering of shares in Ziff-Davis sometime next year.

A successful IPO would also allow Softbank to redeem a Y70bn batch of convertible bonds as they come due, although group executives say proceeds would not be the prime concern.

Mr Son, while refusing to confirm plans for a flotation, indicates that an independent listing for US-based Ziff-Davis would simply be an extension to the autonomy granted to the businesses accumulated over the past two years.

Always fond of a technological metaphor, he says business groupings should be organised loosely along the lines of the internet, rather than from some central point like the mainframe computer systems of old.

But the primary reason for a float is more prosaic. By establishing a public market value for Ziff-Davis in excess of that of the entire parent company, the move would draw attention to the discrepancy between US and Japanese valuations.

There is an irony here. Mr Son's Softbank group, once cited as proof that Japan could produce entrepreneurial multinational companies, has instead become an advertisement for US capital markets.

Nicholas Denton

HP and EDS join electronic commerce team

By Louise Kehoe in San Francisco

Hewlett-Packard and Electronic Data Systems have joined forces with eight leading financial institutions to develop and promote internet banking and commerce.

Founding members of Global Commerce include Citibank, Mondex, Paymentech, Royal Bank of Canada, Sistema 4B, Sumitomo Credit, Visa International and Wells Fargo.

"First Global Commerce is a strategic industry initiative designed to provide financial institutions with a basis for developing and implementing a complete foundation for value-added banking services for the next century," said Lloyd Mahaffey, senior vice-president of global marketing and development at VeriFone, an HP subsidiary that specialises in electronic payment systems.

Bob Murphy, director of integrated payment systems at VeriFone, said members of the consortium would share information and co-operate to establish electronic commerce systems.

The challenge facing financial institutions is to create links between their established "back-end" systems, which process transactions and customer data, with new internet applications.

The consortium is aimed at easing this process through sharing technical information.

"This is a rare opportunity for cross-industry co-operation to change the way people will interact with their financial institutions and purchase goods and services," said Glenn Osaka, HP vice-president and general manager of the extended enterprise business unit.

First Global Commerce is part of a broad effort by HP to capture leadership in the electronic commerce arena, where it is engaged in a market battle with International Business Machines.

Analysts said the consortium could also help HP to leverage its ownership of VeriFone, which it acquired this year for $1.29bn.

Market researchers at International Data Corporation predict that commerce over the internet will grow to by a factor of 20 to more than $220bn by 2001.

HP said it saw big opportunities in updating the payment systems and financial service systems to take advantage of electronic commerce.

Cremolini aims to raise L250bn on junk bonds

By Samer Iskandar

Cremolini, Italy's leading food-processing group, will today announce plans to raise L250bn ($143m) through a high-yield bond issue.

Presentations to investors will take place today in Milan and tomorrow in London.

The issue, Europe's 16th high-yield bond and the second out of Italy, is part of Cremolini's plans to reduce its indebtedness following a L400bn restructuring and modernisation programme. Total debt is equivalent to five times earnings before interest, tax, depreciation and amortisations.

The company had sales of L2,500bn last year.

Analysts believe the company, which is the sole meat supplier in Italy to the US fast-food chain McDonald's, is in a good position to benefit from last year's BSE – or mad cow disease – scare, which has led to tougher Europe-wide food regulation.

After replacing old plants with high-technology production facilities, Cremolini is one of a handful of European food processors to comply fully with EU health standards.

High-yield – or junk – bonds are unrated securities or have credit ratings below the investment grade category BBB by Standard & Poor's and Baa3 by Moody's.

In exchange for the higher risk, they reward investors with returns up to several percentage points higher than safer corporate debt.

Cremolini's five-year bond issue, which will pay a floating rate coupon, is expected to yield more than a percentage point over London interbank rates on the Italian lira.

Bankers Trust of the US and Italy's IMI Bank are lead managers.

Europe's fledgling high-yield debt market has proved more resilient to the recent market turmoil than other asset classes such as emerging-market bonds.

After falling sharply last month in line with the global financial markets, most existing issues have returned to their trading levels of the summer.

Members voice fears over Stockholm bourse merger

By Tim Burt in Stockholm

Leading members of the Stockholm stock exchange yesterday expressed reservations over the revived merger between the exchange and OM Gruppen, the publicly quoted Swedish derivatives exchange.

Some of the largest shareholders in the exchange, who earlier this year blocked a prospective deal between OM and the bourse, said they were concerned that the new proposal could undermine transparency in market regulation and create a monopoly for OM.

Under the new merger plans, announced last week, OM said members of the Stockholm bourse would receive new shares in the enlarged company on an 11-for-3 basis.

In effect, the exchange would then become a subsidiary of OM, which also has links with the Oslo bourse and the Finnish options exchange. It also operates the wood pulp futures and options market in London.

As part of the deal, Investor, the main investment vehicle of Sweden's Wallenberg industrial empire, has offered to reduce its dominant stake in OM from 20.3 per cent to about 15 per cent.

The move was seen as an attempt to assuage concerns of shareholders including Svenska Handelsbanken, Nordbanken and Swedbank.

Earlier this year, the banks joined forces to block the initial merger plan following opposition to the likely influence exercised by Wallenberg-controlled companies.

Arne Maartensson, chief executive of Handelsbanken, yesterday reiterated his concerns and warned that profit expectations at OM could affect the fee structure at the exchange. "Our main focus is to have low transaction costs and we must ensure there is no abuse on a monopolistic situation."

Another shareholder said it would seek guarantees in the merger prospectus that the enlarged group would be properly regulated. Until now, supervision of OM lay with the stock exchange.

Yesterday, however, OM gave assurances that the merger would pose no threat to transaction charges and vowed that a change in legislation would ensure proper regulation of the company.

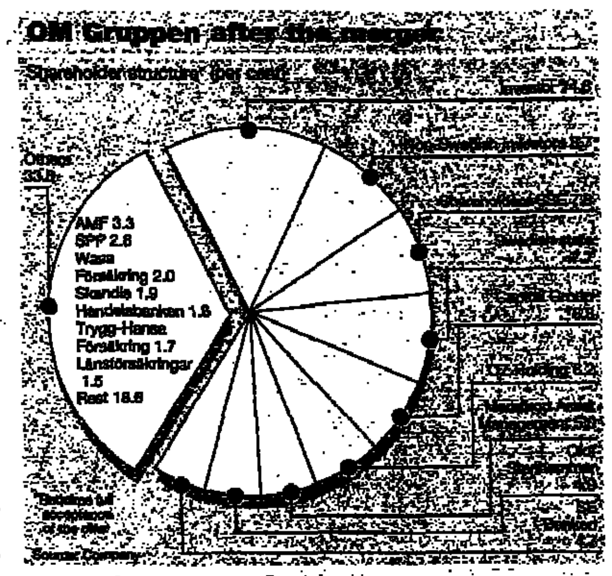
Per Larsson, chief executive of OM, said the company would hold talks with the largest members of the exchange to meet their concerns.

He said the new company would be regulated by Sweden's financial supervisory authority, whose disciplinary committee would have responsibility for handling any complaints over exchange transactions and fees.

Mr Larsson added, moreover, that the exchange already boasted the "lowest fees in the world – and that will not change".

The merger – which OM promises will create the first integrated trading system for both cash and derivative instruments – is intended to enhance Stockholm's position as the largest exchange in Scandinavia.

Although it has already won the support of shareholders accounting for more than two-thirds of the Stockholm Exchange, OM needs to secure 90 per cent backing to complete the transaction.



Buyer of CIC must honour deal with GAN

By Andrew Jack in Paris

Candidates to buy CIC, the French state-controlled banking network, must agree to sell the insurance products of GAN, the parent company, for up to 10 years, according to the official offer documents released yesterday.

Potential buyers will have to respect existing agreements between CIC and GAN – for eight years on the sale of life assurance and 10 years for non-life products – and to favour the development of new insurance links.

The conditions, which are tougher than expected in some areas, stipulate that offers will be accepted for up to 67 per cent of the capital, with GAN retaining at least 20 per cent of either shares or voting rights in CIC.

It requires a statement of what bidders will do to encourage employment creation within the CIC network; how to maintain or increase the different banks' regional identities and decentralised management; and how CIC will be able to "co-exist" with the bidders' banking operations.

Significantly, after discussions over the true value of CIC, the document has a section devoted to procedures for making any accounting adjustments to CIC, with adjudication by three experts and caps on the changes that can be agreed.

It says bids can start at just over 50 per cent of the capital of CIC, and can be made by a single entity or by a group of buyers acting in concert. It stipulates that they must have at least FFr10bn ($1.68bn) in shareholders' capital.

The document says that candidates judged eligible to compete will have access to a data room of confidential financial information on CIC from December 15. Final bids must be submitted by February 23; the government will announce the winner by the end of March next year.

The CIC offer coincides with continuing debate over GAN's losses and the search for those responsible for its poor performance. François Heilbronner, chairman of the group between 1986 and 1994, argued yesterday that the French state should be held responsible for the losses, most of which were incurred at CIC's property lending subsidiary, UIC.

He said he had repeatedly asked the government to give him full control over CIC and UIC, the chairmen of which were separately appointed. He was granted this power only in 1993, when he launched an audit which revealed the extent of the losses.

Several individuals close to GAN yesterday argued that estimates of up to FFr50bn in accumulated losses since 1991 were too high, because they were calculated using gross losses rather than consolidated figures. The ministry of finance said the total was nearly FFr40bn.

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Sharp moves to Mexican plant

By Christopher Parkes in Los Angeles

Sharp Electronics is to move production of small-screen television sets from its plant in Memphis to a new $27m factory to be built in Mexico.

The Japanese company expects to make 1m sets and 1.5m vacuum cleaners a year in the initial phase. More operations are expected to be added later.

The move to Rosarito Beach, 20 miles south of the US border, will create about 1,000 jobs and free space in the Memphis plant for increased output of big-screen TV sets and digital products.

None of the US plant's 1,400 workers is expected to be laid off.

Sharp's move, which follows last week's agreement for Oriental Land to build a $2.5bn DisneySea theme park in Tokyo Bay, is a further indication that Asian economic turmoil has had little immediate impact on Japanese companies' long-term international investment plans.

Mexican officials say other recent projects in the border region – booming under the impact of the North American Free Trade Agreement – are still on course. These include two factories planned by Nippon Electric Glass and a joint venture between Corning, Samsung and Asahi Glass with a total investment value of $600m.

Sharp is one of the last of the leading Asian consumer electronics and appliance groups to set up in the border region, where low labour costs and Nafta tariffs are among the attractions. Others already present are Matsushita, Sony, Samsung and Sanyo.

Rosarito Beach, still best known as a resort town, has benefited from overspill from the crowded Tijuana area to the north. Its cheap land and labour costs have drawn interest from Hollywood's film production industry.

Its most recent developments include a vast sound stage built for the filming of *Titanic*, the Paramount/Fox joint venture to be released shortly. The complex has the world's largest water tank, used for filming sea scenes.

The town's attractions for industry will soon be increased by a new power station, natural gas feed lines for electricity generation and domestic use, and the upgrading of its power distribution network.

The Sharp plant, due to open next October, will make television sets with 20-inch screens or smaller for distribution in North and South America.

Moyne sold stake to Virgin Islands group

By Greg McIvor in Stockholm

The confusion over Lord Moyne's involvement in Trustor, the Swedish investment company caught in a SKr620m ($79.4m) fraud inquiry, deepened yesterday when it emerged he sold his stake to a Virgin Islands company more than a month ago.

Trustor's new board said Lord Moyne, former chairman, had sold his 51.8 per cent voting stake to St Crispin Trading, thought to be registered in the Virgin Islands.

Björn Björnsson, Trustor's acting managing director, said he knew nothing of St Crispin. "This [case] is getting even more confused," he said.

Lord Moyne notified Trustor's board late last week that the sale had taken place on October 30, Mr Björnsson said.

This was the day before a Swedish newspaper broke the story of Trustor's involvement in an alleged financial misappropriation scandal.

It was unclear last night whether Lord Moyne had any link with St Crispin Trading. Lord Moyne, whose stake in Trustor cost SKr240m in June, could not be reached for comment. However, reports said St Crispin was represented by the Swiss lawyer who attended Trustor's extraordinary shareholders' meeting on Lord Moyne's behalf last week.

Mr Björnsson said he expected St Crispin would challenge the freezing by a Stockholm court of Lord Moyne's shares as security for an action for damages against him by Trustor's minority shareholders.

Although the sale of Lord Moyne's shares preceded the freezing order, it is unclear if St Crispin is legally bound by the order.

St Crispin is believed to be considering a legal challenge to an application by Trustor's minority shareholders for the company to be put into compulsory liquidation.

Legal experts said Lord Moyne and St Crispin appeared to have breached Stockholm stock exchange rules by failing to disclose the change of ownership within sufficient time.

LVMH reorganises its make-up bag

By Alice Rawsthorn

LVMH, the French luxury goods group which owns Louis Vuitton luggage and Moët-et-Chandon champagne, is merging its perfume and cosmetics interests into a single division.

Until now, the LVMH beauty companies, which include those associated with the Christian Dior, Givenchy and Kenzo fashion houses, as well as Guerlain, one of the oldest Parisian *parfumiers*, have been run as separate entities.

Once the restructuring is completed, the different beauty brands will come under a perfume and cosmetics division.

Patrick Choel, chairman and chief executive of Parfums Christian Dior, will be president of the new division, and Elizabeth Desvignes, chief financial officer of Parfums Givenchy, has been appointed its financial controller.

The reorganisation of the beauty interests coincides with efforts to rejuvenate LVMH's fashion brands. In the past year, new designers have been appointed at Givenchy, Vuitton, Loewe, Celine and Christian Dior, part of Agache, which is controlled by Bernard Arnault, LVMH's chairman.

LVMH said the restructuring was intended to organise its beauty interests in a similar way to those of other large companies in the increasingly consolidated and competitive cosmetics market.

The cost of promoting new perfumes and cosmetic products has escalated in recent years, as has competition for retail space. Rival companies such as France's L'Oréal and Estée Lauder of the US already pool the resources of different beauty brands in areas such as distribution to a greater degree than LVMH.

The French group owns three of the world's 10 best-selling women's prestige perfumes of 1996 – Dolce Vita and Dune by Dior, and Guerlain's Shalimar – according to a study by Euromonitor, the research consultancy.

Marriage problems for True North

US group's decision to seek new partner has renewed ardour of its former ally

Nearly a decade of bickering between two of the world's biggest advertising agencies was supposed to have ended when True North Communications, of the US, and Publicis, of France, agreed the terms of a divorce earlier this year.

But the acrimony has burst out all over again following True North's decision to seek a new marriage partner, resulting in a bizarre two-way takeover battle with True North stuck in the middle.

The latest chapter in the saga began in July when True North, parent of Foote, Cone & Belding Worldwide, announced it had agreed to buy Bozell, Jacobs, Kenyon and Eckhardt, a big New York based advertising agency, for about $440m in True North stock.

True North, already North America's biggest advertising company, said the deal would virtually double its size, creating the world's sixth biggest advertising company with billings of more than $11.5bn.

The deal seemed to be progressing steadily towards a shareholder vote at the end of this month when, to Madison Avenue's amazement, Publicis declared that it strongly opposed the transaction – and instead, suggested taking over True North for $28 a share in cash and stock, valuing the company at $709m.

Publicis is in a position of influence over True North because it holds 18.5 per cent of its stock, a memento of the companies' unhappy alliance. In turn, True North holds a 26.5 per cent stake in Publicis Communications, Publicis's main advertising subsidiary.

The two companies formed their alliance in 1988 because, although strong in their home markets, they wanted a wider global span so they could offer full services world-wide to their big, international clients.

But the agreement turned sour almost as soon as the ink was dry on the paper. Maurice Levy, chairman of Publicis, accuses True North of having tried to "manipulate" the agreement to gain total control, while Bruce Mason, chairman and chief executive of True North, says Publicis undermined it by acquiring a rival agency in the US.

In a letter to the True North board explaining why it opposed the Bozell deal, Mr Levy said Bozell was primarily a US-based business with a weak international presence. It said: "The acquisition does not solve True North's fundamental strategic weakness, which has been its failure to establish a global presence."

On the other hand, Mr Levy said: "Merging our two companies' networks would create a combined entity with a very strong and creative presence in most of the world's significant markets, enabling us to deliver a complete range of services to global clients."

Firmly rejecting the overture, True North's Mr Mason replied that it would be "unrealistic to ignore a decade of difficulties between our two companies", and predicted that any such combination would lead to a "significant fall-out" of key clients and employees.

Indeed, a few days later, True North's biggest client, S.C. Johnson & Son, wrote to Publicis saying it would switch agencies if True North were taken over by Publicis.

Mr Mason says he finds it "a bit amusing" that Publicis should come up with a marriage proposal after all the bitterness between the two companies, and dismisses the overture as "a phantom offer" too insubstantial to be taken seriously.

He also rejects Publicis's criticism of True North's global presence. The US accounts for about 75 per cent of the world's advertising spending, he says, but it accounts for only about 70 per cent of Foote, Cone & Belding's business. For Bozell, the proportion is about 80 per cent.

Wall Street analysts say Publicis's real intent may be to derail True North's takeover of Bozell rather than to acquire True North itself.

James Dougherty, an analyst at Dean Witter Reynolds, says Publicis is concerned that the acquisition would dilute its stake in True North to the point where, under French accounting rules, Publicis could no longer include a proportion of True North's earnings in its own profits.

Mr Dougherty says the proposed transaction will also result in a big charge to True North's earnings in this year's fourth quarter, hitting Publicis's earnings at a time when the company's own business is not doing well. "They lost money in France in the third quarter, and it's not looking good for the rest of the year."

Analysts also point out that hostile takeovers are rare in the advertising industry because of the risk that the target company's most important assets – its people – will walk out of the door. Even so, Karen Ficker, of Furman Selz points that this need not be an insurmountable obstacle, if the price were right.

"If Publicis were to purchase the company, there would no longer be a Foot, Cone & Belding per se," Ms Ficker says. "The company would be merged into into Publicis, and you would no longer have those management issues because the management would no longer be there."

Richard Tomkins and Andrew Jack

Ad wars

True North Communications	Bozell, Jacobs, Kenyon and Eckhardt	Publicis
Company: Chicago-based parent of Foote, Cone & Belding Worldwide advertising agency. Quoted on New York Stock Exchange	Company: New York based holding company bought by its management from Lorimar in 1988. Main advertising subsidiary: Bozell Worldwide	Company: Paris-based holding company of Publicis Communication, its main advertising subsidiary. Quoted on the Paris Bourse
Clients include: S.C. Johnson & Sons, AT&T, Levi Strauss, Nabisco	Clients include: Chrysler, Merrill Lynch, Bristol-Myers Squibb	Clients include: Renault, Nestlé, L'Oreal
Billings (1996): $7bn	Billings (1996): $3.7bn	Billings (1996): FFr22bn
World-wide ranking: 10	World-wide ranking: 14	World-wide ranking: 13
Financial results (year to Dec 31, 1996): Net profits of $27.8m on revenues of $493m	Financial results (year to Mar 31, 1997): Net income of $14.1m on revenues of $495m	Financial results (1996): Net profits FFr185m

Sources: Company reports, Advertising Age

INTERNATIONAL NEWS DIGEST

Erste Bank offer priced

Austria's Erste Bank yesterday set the price for its global share offering at Sch610 a share, at the low end of the range. The offer of 11.52m shares was worth about Sch7bn ($556m), making it the largest initial public offering in Austria. Both the retail and institutional tranches were two times subscribed. The shares will be listed tomorrow on the Vienna Stock Exchange.

Erste is the product of a merger this year between savings bank Die Erste and GiroCredit. In addition to the the global offering, Erste will tomorrow launch a one-for-14 rights issue of almost 3m new shares to existing shareholders. The bank has named its strategic partners as Commerzbank of Germany, Bacob, the Belgian group, Swedbank of Sweden, Austrian insurer EA-Generali and the BARC group, with a combined 16 per cent of the enlarged share capital. Joint global co-ordinators for the offering were UBS and Erste Bank. *Agencies, Vienna*

■ SOFTWARE

Dassault Systemes in $105m buy

Dassault Systemes, the French software company, has agreed to buy Deneb, of the US, for $105m in cash. Dassault said it expected to take a one-time charge of $85m-$90m in the 1997 fourth quarter, related to the write-off of in-process research and development costs and about $4m of acquisition costs.

Dassault will complete the acquisition during the fourth quarter, with a preliminary closing by the end of 1997. It expects the acquisition to be non-dilutive to 1998 earnings.

Deneb supplies digital manufacturing applications.

Dassault said the US company and its subsidiaries would become a unit of Dassault Systemes and would operate as a separate entity under the brand name Deneb, the digital manufacturing company of Dassault Systemes. *Agencies*

■ HUNGARY

Raba launches retail offering

Raba, the Hungarian truck and components maker, yesterday launched a domestic retail offering. The shares were priced last week at Ft1,475, valuing the company at about $108m ($54m).

The latest offering of 5 per cent of Raba forms the final stage of its complicated privatisation. In September, the Hungarian privatisation agency APV sold off almost 50 per cent of the company to strategic and financial investors consisting of the EBRD, First Hungary Fund, Raba management, Hungarian home improvements company Graboplast, and DRB Hicom, the Malaysian holding company. The five also provided a $25m capital injection.

Last week, an international and domestic private placement to institutional investors for an 18 per cent stake, or 2.7m shares, was 6.3 times subscribed. The remaining shares have been allocated to employees or are held by municipalities. *Kester Eddy, Budapest*

■ SPAIN

Unions call steel strike

Spanish trade unions have called a one-day strike on December 11 at plants of Aceralia, the steelmaker, in protest at the current privatisation. Aceralia said there would also be a protest on December 4.

The Spain is selling its 52.8 per cent stake in the company through an initial public offering, which will complete the company's privatisation.

Applications from retail investors were this week understood to have represented about Pta7,000bn ($46.9bn), more than eight times the total offered to small domestic investors. *Reuters, Madrid*

■ TYRES

Michelin man gets face-lift

Bibendum, the roly-poly figure in the logo of France's Michelin tyre and rubber group, is set to shed a few pounds when the company gives its image a face-lift next year for its centennial.

The move will give Bib, as he is known to Michelin employees, a look that is leaner and healthier and more in keeping with the modern image the company wants to project, Michelin said. "We want to show that we can adapt to changing circumstances without sacrificing ourselves on the altar of fashion," it said.

The original Bibendum was drawn more than a century ago after Michelin's two founders, Andre and Edouard Michelin, saw a pile of tires that resembled the human form. *Agencies, Paris*

■ MACHINERY

Deutsche Babcock cuts losses

Deutsche Babcock, the troubled German machinery maker, said group full-year net losses were cut from DM444m to DM239m ($134.5m).

Klaus Lederer, chief executive, said the group aimed to show a net break-even in the current fiscal year and to remain in the black from next year. The company said all divisions would become profitable this year and that management positions would be trimmed.

Subsidiary Balcke-Duerr will come under the direct management of the holding-company parent, combining management functions to cut up to DM18m in costs. The Schumag subsidiary is no longer for sale.

Babcock's sales rose from DM8.7bn in 1995/96 to DM9.1bn in 1996/97. *Reuters, Germany*

■ PERU

Gold miner in $100m expansion

Minera Yanacocha, Peru's largest gold miner, will invest $100m to expand operations next year, said Newmont Mining, one of its joint owners, yesterday. Yanacocha produced 26.6 tonnes in the first 10 months of 1997, up 26.6 per cent compared with the same period last year, according to Peruvian government figures. It accounted for 43 per cent of total national output in the first 10 months of the year. *Reuters, Lima*

■ FORESTRY

SCA to buy Lantero stake

SCA, the Swedish forestry group, said it was buying 25 per cent of the corrugated board division of Spain's Lantero. SCA said Lantero would issue new shares which it would buy for SKr196m ($25m). The companies intend SCA to increase its shareholding to 49 per cent. *Reuters, Stockholm*

■ TELECOMMUNICATIONS

Alcatel Alsthom wins Egypt deal

Alcatel Alsthom, the French telecommunications and engineering company, has won a contract to supply 800,000 telephone lines over five years from Telecom Egypt. The French company said yesterday that the initial phase of the project, for 100,000 lines of its Alcatel 1000 system, was worth about FFr250m ($42m). Alcatel declined to specify the value of the total project but industrial sources put it about FFr800m. *Reuters, Paris*

Prices for electricity determined for the purposes of the electricity pooling and settlement arrangements in England and Wales.

Provisional Price for Trading on 03.12.97 — Final Prices for Trading on 03.11.97

½ hour period ending	Pool purchase price £/MWh	Pool purchase price £/MWh	Pool selling price £/MWh	TS use of system price £/MWh
0030	22.05	15.32	15.36	1.28
0100	22.14	24.02	24.07	1.28
0130	22.14	24.02	24.07	1.28
0200	22.14	24.02	24.07	1.28
0230	22.14	15.32	15.36	1.28
0300	22.14	15.32	15.36	1.28
0330	22.14	15.32	15.36	1.28
0400	22.14	15.32	15.36	1.28
0430	22.14	10.47	10.47	0.00
0500	22.14	10.46	10.46	0.00
0530	25.48	10.47	10.47	0.00
0600	25.48	10.47	10.47	0.00
0630	29.55	15.23	15.28	1.28
0700	35.56	15.23	15.28	1.28
0730	32.51	16.66	16.71	1.28
0800	35.81	17.02	17.06	1.28
0830	40.21	29.81	29.86	1.28
0900	37.05	29.81	29.86	1.28
0930	37.29	31.64	31.69	1.28
1000	41.38	31.64	31.69	1.28
1030	41.42	31.64	31.69	1.28
1100	41.47	31.64	31.69	1.28
1130	64.94	31.64	31.69	1.28
1200	65.08	56.16	56.21	1.28
1230	64.71	56.16	56.21	1.28
1300	64.22	56.16	56.21	1.28
1330	36.96	31.64	31.69	1.28
1400	36.93	31.64	31.69	1.28
1430	36.87	29.81	29.86	1.28
1500	36.87	29.81	29.86	1.28
1530	37.86	29.81	29.86	1.28
1600	62.19	29.82	29.87	1.28
1630	144.05	35.55	35.77	1.28
1700	263.05	58.15	60.50	1.28
1730	282.97	93.04	98.47	1.28
1800	222.44	94.18	97.71	1.28
1830	112.50	62.41	64.62	1.28
1900	76.90	51.43	52.10	1.28
1930	56.33	44.14	44.32	1.28
2000	43.25	31.67	31.74	1.28
2030	40.65	31.64	31.69	1.28
2100	36.55	31.64	31.69	1.28
2130	32.46	29.81	29.86	1.28
2200	32.42	29.81	29.86	1.28
2230	32.33	26.39	26.44	1.28
2300	30.38	16.66	16.71	1.28
2330	29.55	15.23	15.28	1.28
2400	25.48	15.23	15.28	1.28

Prices are determined for every half-hour in each twenty four hour period. Prices are in pounds per megawatt-hour, rounded to two decimal places. To convert prices to pence per kilowatt-hour the decimal point should be moved one place to the left, eg £16.68/MWh becomes 1.668p/KWh. Provision for the determination of pool prices is made in the Pooling and Settlement Agreement which governs the operation of the electricity pool in England and Wales. The Pool Purchase Price is the basis of the majority of payments made to generators in respect of electricity traded through the pool. The calculation of pool prices is a highly complex process the product of which is subject to revision or correction (and sometimes major [illegible]) until final pool prices are determined approximately twenty-four days after the day of trading. Accordingly, due to the possibility of their revision and/or correction, no reliance should be placed upon provisional pool prices for any day being the same as final pool prices for that day. Final pool prices are also capable of revision. The Transmission Services Use of System Price (TSP) is charged by the National Grid Company plc (NGC) for the operation and development of its electricity transmission system for the purpose of optimising the costs arising from the operation of that system. Charges are calculated by NGC and are based on [illegible] made by NGC into the pool. TSP is also capable of revision. Pool Selling Price is the price paid by purchasers of electricity under the pool trading arrangements. It is dependent upon the determination of Pool Purchase Price. Further information on pool prices is provided on behalf of the Pool and on TSP on behalf of NGC by Energy Settlements and Information Services Limited. Anyone wishing to receive such information should telephone 0115 945 6780 between 8.30am and 5.15pm Monday to Friday.
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COMPANIES AND FINANCE: UK

NatWest cut down to size

By Clay Harris, William Lewis and Jane Martinson

National Westminster Bank yesterday cut itself down to size, selling its European equities and derivatives operations for a combined price of £179m ($299m).

The deal with Bankers Trust of the US and German-owned Deutsche Morgan Grenfell ends NatWest's ambitions to own a global integrated investment bank.

Bankers Trust is paying £129m for NatWest Markets' equities business in Europe, including the UK. DMG will pay £50m for the programme trading operation and associated equity derivatives side.

NatWest also announced the closure of its US equities operation, with the loss of 200 jobs. Like its similarly retrenching UK rival, Barclays, NatWest is also trying to sell its Asian equities business and Australian investment bank.

The UK bank said it expected NatWest Markets as a whole to produce a pre-tax loss of £210m for 1997, mostly attributable to the equities operation.

NatWest will also make a provision of £270m to cover redundancy and restructuring costs plus a £65m goodwill adjustment.

David Townshend, banking analyst at Goldman Sachs, said: "NatWest has exited from a business that it didn't have the scale to compete in and that's good. But it has clearly been expensive [to get out]." Several analysts expected part of the restructuring charge to be used for reorganising NatWest Markets' capital and corporate finance arms.

NatWest last month rejected an approach from DMG for practically all of the businesses sold yesterday. DMG's offer was comparable in monetary terms but would have required hundreds of redundancies in Europe. Yesterday's deal avoids such job losses because NatWest's and Bankers Trust's European operations hardly overlap.

Bankers Trust is taking more than 900 NatWest Markets staff, while 208 – including 120 in the back office – are transferring to DMG.

DMG's European expansion is now likely to focus on a smaller acquisition or the hiring of teams, perhaps as the fall-out from other banking mergers.

Richard Daniel, Bankers Trust's chief financial officer, said "this transaction puts a top notch team on the field in the European equity markets." Bankers Trust's European business focuses primarily on debt securities and merger and acquisition advice, particularly for companies with lower than investment grade ranking.

Adding equities should enable Bankers Trust to "capture a larger share of our clients' business than we otherwise would get".

Siebe bullish on south-east Asia

By Andrew Edgecliffe-Johnson

Siebe, the engineering group, pleased the City yesterday by shrugging off the effects of the strong pound and saying that the turbulence in south-east Asian markets represented a buying opportunity rather than a threat.

Barrie Stephens, delivering his last results after 33 years as chairman, said pre-tax profits in the six months to September 30 were up 16 per cent to £221.7m ($370.2m) despite an £18.8m hit from currency translation.

Interim turnover advanced 16 per cent to £1.71bn, and trading was "off to an excellent start" in the second half.

Allen Yurko, chief executive, said the results had been flattened by sterling's strength. "What's really going on at Siebe is organic sales growth of 9.8 per cent and organic profit growth of 20.8 per cent," he said.

"We're not backing off in the Far East and emerging markets," he added: "We see this as an opportunity to buy further in those regions."

Acquisitions would be "clip-ons" of about £100m, he said, and were more likely in industrial equipment than in temperature and appliance controls.

Siebe would be careful not to overstretch a management which is still digesting the £193m acquisition of Eaton Corporation's appliance controls operations and the £327m purchase of APV, the process equipment maker, he added.

The group, which benefited from exporting from Japan and elsewhere in south-east Asia, plans to move more manufacturing to sites in the region, which have become more competitive because of local currency devaluations.

Brendan Corr
Barrie Stephens: last results after 33 years as chairman

Stagecoach launches points scheme

By Charles Batchelor, Transport Correspondent

A "bus points" scheme to provide bus passengers with similar benefits to the air miles promotions run by airlines has been launched by Stagecoach as part of a programme to boost bus use.

Stagecoach hopes bus points will boost revenues and launched a trial scheme two months ago with its three Scottish companies. However, this was too late to contribute to yesterday's announcement of a 50 per cent rise in first half pre-tax profits to £70.5m ($117.7m).

Under the scheme, passengers qualify for a £1 voucher from retailers, including Marks & Spencer, Argos and McDonald's, for every £30 of bus tickets they send in.

One early result has been cleaner buses, though Stagecoach says it is alert to people collecting other passengers' discarded tickets. "We would be suspicious if someone sent in £30 of tickets all with same date," said Keith Cochrane, finance director. Bus points represents an addition to the company's range of marketing initiatives, which include running older, lower-fare buses alongside its own full-fare modern vehicles on busy routes.

Stagecoach's UK bus businesses achieved a 1.9 per cent increase in passenger numbers against a a 1 per cent decline in the industry generally. Operating profits in the division rose from £30.7m to £33.4m after allowing for the £2m start-up costs of a new bus operation in Glasgow.

The star performer was the privatised Porterbrook rolling stock leasing company, acquired last year, where operating profits rose to £62.7m from £13.5m on revenues of £136m. Porterbrook has been the most successful bidder for new train contracts and has confirmed orders worth £250m.

The government is reviewing whether to extend rail regulation to cover the three privatised rolling stock leasing companies and Save our Railways, a lobby group opposed to privatisation, called yesterday for ministers to put an end to Porterbrook's "fat cat profits."

But the company pointed to guarantees it gave when it acquired Porterbrook not to increase leasing fees when current contracts expire.

Board shake-up at Royal & Sun

By Christopher Adams, Insurance Correspondent

Richard Gamble, chief executive of Royal & Sun Alliance, is to leave the UK's biggest composite insurer. In an unexpected boardroom shake-up announced yesterday, executive deputy chairman Roger Taylor will also relinquish his management role.

Robert Mendelsohn, a US citizen who heads the group's American business, will become chief executive.

The move follows mounting speculation about a strategy rift between Mr Gamble, 57, and Mr Taylor, 55, who held the top jobs at Royal Insurance and Sun Alliance before they merged last year and have overseen their integration. Mr Taylor will continue as deputy chairman, but in a non-executive capacity.

Analysts had voiced concern that the management structure imposed after the merger, which divided executive responsibility between the two, was confusing and unwieldy.

Shares in the group rose 14p to 560p yesterday as investors reacted positively.

Patrick Gillam, the recently appointed chairman of the group, said: "There are periods in the lives of big companies when you have to make changes and that's what we're doing. It was a boardroom decision."

His comments appeared to contradict recent statements from the company denying any pressure to redefine their roles.

Mr Mendelsohn, 51, helped turn round Royal Insurance's poorly performing US operations, but has yet to extract strong growth from them.

Colloids opens bid defence with £32m

By Emiko Terazono

Allied Colloids, the UK-based speciality chemicals group, yesterday placed the first plank in its defence against the £1.07bn ($1.78bn) bid from US rival Hercules when it unveiled first-half pre-tax profits up 52 per cent to £32.1m.

Hercules rapidly hit back, saying the figures were "at the bottom end of analysts' expectations".

Excluding a maiden £7.8m contribution from CPS, bought in November 1996, Allied's pre-tax profits rose 15 per cent to £24.3m in the six months to September 30.

Sales rose 19 per cent to £247m including £43m from CPS. The figures were struck after a one-off £2m charge for consultancy and a loss of £500,000 from the superabsorbents business, sold last month.

David Farrar, chief executive, said the figures showed the benefits of growth flowing through to the bottom line. He said Hercules' criticism was "inevitable nitpicking."

He said the CPS acquisition had enabled more bulk buying, cutting raw material costs. Manufacturing efficiency had increased.

Overhead costs excluding CPS and after currency changes rose by 3.8 per cent, while operating margins rose from 11 per cent to 15 per cent.

Net debt totalled £150m, giving gearing of 72 per cent, up from 59 per cent as the company invested £21m and built up stock ahead of the second half. Earnings per share rose 27.3 per cent to 3.5p (2.75p). The interim dividends is 0.725p (0.64p). The shares yesterday rose 1p to 169p.

RESULTS

		Turnover (£m)		Pre-tax profit (£m)		EPS (p)		Current payment (p)	Date of payment	Corresponding dividend	Total for year	Total last year
Alba	6 mths to Sept 30	110.5	(79.3)	3.22	(1.43♠)	4.78	(2.21)	1.4	Apr 27	1.25	-	6
Allied Colloids	6 mths to Sept 30	247	(207.6)	32.1	(21.1)	3.5†	(2.75)	0.725	Feb 18	0.64	-	3.15
Aertech Intl	6 mths to Sept 30	6.936	(2.17)	0.234L	(1.13L♠)	1.4L†	(8.1L)	-	-	-	-	-
Character	Yr to Aug 31	41.3	(30.3)	4.73	(3.66)	15.08	(12.33)	3.3	Jan 30	2.5	4.5	3.5
Christie	6 mths to Sept 30	12.4	(9.83)	0.41	(0.256)	1.19	(0.7)	-	-	-	-	1
Chrysalis	Yr to Aug 31	107.8	(111.4)	1.95L♥	(5.37L♠)	5.53L	(19.45L)	2.75	Apr 8	2.75	2.75	2.75
Columbus	6 mths to Sept 30#	12.1	(10.5)	1.49	(1.08)	0.6†	(0.41)	0.16	Feb 27	0.1	-	0.37
Crabtree	Yr to Sept 30	52.3	(48.5)	0.109	(2.59)	nil†	(9.8)	2	Mar 16	5.25	3	9
Dee Valley	6 mths to Sept 30	9.51	(5.93)	4.66	(3)	24.42	(22.08)	6.6	Jan 5	5.5	-	18
East Surrey	6 mths to Sept 30	24.4	(24.1)	10.8♥	(8.61)	15.6	(13.2)	4	Jan 5	3.6	-	10.8
Eldridge Pope	Yr to Sept 30	63.8	(61.4)	5.38♥	(4.38♥)	20.2	(16.6)	3.98	Feb 6	3.45	6.10	5.3
Field	27 wks to Oct 5	117.7	(108.5)	12	(10.5)	15.3	(13.3)	3.4	Feb 19	3.1	-	9.4
Firth Holdings	6 mths to Sept 30	24.8	(16.7)	0.43	(1.03)	0.48†	(1.34)	-	-	-	-	0.25
General Cable	9 mths to Sept 30	81.7	(36.6)	37.8L	(21.2L)	10L	(7.4L)	-	-	-	-	-
Get	Yr to Aug 31	43.5	(38.3)	1.92♠	(0.885♠)	8.33	(3.52)	2.1	Jan 12	1	3	1.5
Hazlewood Foods	6 mths to Sept 30	380.9	(388.5)	10♠	(11.4♠)	2.07	(3.09)	2.6	Jan 20	2.4	-	6.9
Hogg Robinson	6 mths to Sept 30	789.7	(97.3)	1.9♠	(14)	3.7L	(10.38)	4.07	Jan 20	3.7	-	9.8
Le Riches Stores	28 wks to Oct 11	83.4	(76.2)	5.28♠	(4)	24.7	(19.4)	6	Dec 19	5	-	20
Merrydown	6 mths to Sept 30	11.5	(19.4)	0.944L♠	(0.673)	6.73L	(3.57)	nil	-	2.1	-	3.1
Morrison Construct	6 mths to Sept 30	156.4	(123.1)	6.68	(4.77)	6.77	(4.69)	1.8	Jan 2	1.64	-	5.14
Norbain	6 mths to Oct 31	41.2	(43)	0.091♠	(2.02)	3.28L	(12.49)	3.3	Feb 2	3	-	8.5
OMI Intl	6 mths to Sept 30	20.5	(21.6)	1.78♥	(0.38♠)	2.4	(0.5)	0.14	Feb 2	nil	-	0.1
Sanderson	Yr to Sept 30	67.1	(61.4)	2.78♠	(6.2)	4.7†	(10.1)	2.5⁑	Feb 2	2.2	-	4.6
Scottish Radio	Yr to Sept 30	37.4	(28.4)	9.31	(7.01)	23†	(18.7)	6.4	Jan 28	5.3	9.4	7.8
Shaftesbury	Yr to Sept 30	14‡	(9.27‡)	5.91♥	(3.87)	4.73†	(6.17)	1.5	Feb 6	1.25	2.25	2
Siebe	6 mths to Sept 30	1,707	(1,471)	221.7	(190.4)	27.7†	(24)	5.4大	Apr 8	4.9	-	14.7
Sira Business Serv	6 mths to Oct 31	5.16	(2.81)	0.43	(0.285)	0.133†	(0.091)	0.0337	Dec 16	0.0228	-	0.05
Stagecoach	6 mths to Oct 31	681.5	(405.1)	70.5	(47♥)	20.9†	(18)	4	Feb 19	3	-	9
Stirling	6 mths to Sept 30	50.9	(46)	2.01	(1.46)	1.6	(1.11)	0.68	Jan 23	0.63	-	2.3
VideoLogic	6 mths to Sept 30	5.46	(7.33)	2.93L♠	(1.24L)	1.9L	(0.8L)	-	-	-	-	-

Earnings shown basic. Dividends shown net. Figures in brackets are for corresponding period. ♠After exceptional charge. ♥After exceptional credit. †On increased capital. 大Foreign income dividend. ΦAim stock. #Pro forma. ⁑First interim for current year. ‡Operating income.

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Hogg Robinson near to US acquisition

By Roger Taylor

Hogg Robinson is close to a US acquisition in the latest piece of its strategy to build a global business travel business.

The move, together with a £15m ($25m) share buy-back announced yesterday, will go a long way towards using up the company's £37.5m cash pile following the management buy-out of its transport division in September for up to £23m.

The news came as Hogg reported interim pre-tax profits of £1.9m (£14m) after writing off £12.8m of goodwill on the sale of the transport division.

David Radcliffe, chief executive, said the sale allowed the company to focus on business travel and financial services. He said the travel side would be the focus of future expansion.

Hogg Robinson operates through an alliance of regional operators, but it aims to buy control of businesses in other areas, starting with the US.

Mr Radcliffe said that the company could borrow about £40m which with the £37.5m cash gives its spending money of about £80m, allowing both acquisitions and a share buy-back. The company is buying back 7.5 per cent of its shares but has permission to buy back a further 7.5 per cent.

Excluding exceptional costs and discontinued operations, profits were up 20 per cent at £14.53m for the six months to September 30 on sales of £790m (£760m). On the same basis, earnings per share were up at 11.01p (8.97p) but after exceptionals, there was a 3.7p loss.

Mr Radcliffe said the results would have been stronger had it not been for a £1m hit from the strong pound. The company's shares lost about one third of their value after the company warned in January that profits would be hit by adverse exchange rates.

Ashley Ashwood

David Radcliffe: Hogg had spending money of about £80m

Alba takes colourful route to £3.2m

By Andrew Davis

Strong demand for consumer electronics products, bolstered by windfall gains from demutualising building societies, helped Alba more than double first-half pre-tax profits to £3.22m.($5.37m)

Daniel Harris, chief executive, said a "mood of optimism" had underpinned the performance, which included a 39 per cent jump to £22.8m in sales at the Bush Radio unit. Strong trading across the group had continued into the second half, he said.

The company, which takes in the Alba, Bush, Hinari and Goodmans brands, had also benefited from starting to use brightly coloured casings on larger products such as televisions, and tailoring them for different uses, such as computer games.

The jump in pre-tax profits from £1.43m to £3.22m in the half year to September 30 came on sales ahead from £79.3m to £110.5m, including a £10.7m contribution from Roadstar, the lossmaking Swiss group bought for £3m in March. However, last year's pre-tax result was depressed by a £1.35m reorganisation charge.

Mr Harris said profits growth had been driven by increased volumes and gains in market share – margins and prices were steady.

Roadstar, which was taking the group into new continental European and Middle Eastern markets, was expected to break even this year and to start contributing next time.

The interim dividend rises to 1.4p (1.25p) on earnings up from 2.21p to 4.76p. The shares gained 8½p to 207½p.

VideoLogic sets sights on transfer to Nasdaq

By Christopher Price

Shares in VideoLogic fell 10 per cent yesterday after the 3D graphics specialist announced doubled losses, a restructuring provision, and the retirement of Tony Maclaren, its founder and chief executive.

However, Geoff Shingles, chairman, criticised the reaction of the market: "We are in the wrong market at the wrong price." He said the company would be looking at transferring to a listing on the Nasdaq stock market in the US, where "at least then we might get a proper valuation."

Mr Shingles said the "extremely positive" results drew a line under the group's new strategy. This involved a move away from producing plug-in 3D graphic cards for personal computers to concentrating on designing specialist silicon chips and software.

This had caused sales to fall 26 per cent to £5.5m, ($9.2m) and was also responsible for a £1.9m provision for closing the US card sales operation. Pre-tax losses more than doubled to £2.9m.

LEX COMMENT

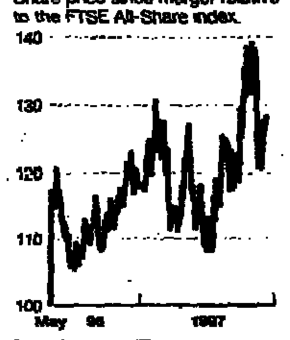
Royal & Sun

Royal & Sun Alliance shareholders should welcome the tidying up of the management structure. The clumsy cohabitation arrangement that lapses with Robert Mendehlson's appointment as chief executive never looked durable.

That said, its faults were probably overstated. While the priority was bedding down last year's merger, it was sensible enough to have its two architects at the helm. And if this was the cost of getting the merger in the first place, it was a small price to pay. Outsiders may have wondered where the buck stopped, but it is not clear the company suffered. However, with 80-90 per cent of R&SA integrated, the old structure was starting to look past its sell-by date.

Royal & Sun Alliance

Share price since merger relative to the FTSE All-Share index.



Source: Datastream/ICV

A new strategy is required and, as with any other company, one person should be responsible for delivering it. By overlooking the two incumbents and appointing the highly regarded Mr Mendehlson, Patrick Gillam, chairman, appears to have achieved a neat solution to a tricky problem.

With luck, Mr Mendehlson will be able to repeat his US success with the whole group. One priority will involve developing a decent non-UK strategy. Not only do its businesses in countries like Germany, Italy and Spain lose money, but they compare unfavourably with competitors like Generali and Allianz.

The other will be to leverage the company's 16 per cent UK market share to greater advantage. If Mr Mendehlson succeeds, he may even be able to attract a fancy US style rating.

Michiyo Nakamoto on progress towards retrieving ozone-depleting gases in use in air conditioning and refrigerators

Japan recovers its CFC record

When the Montreal Protocol calling for a reduction in ozone-depleting chlorofluorocarbons (CFCs) was agreed a decade ago, Japanese industry moved quickly to replace the harmful gases with substitutes.

Production of CFCs has been halted, in line with the country's international commitments. But Japan has been slow to recover CFCs already in use and to prevent the gases from escaping and eating into the ozone layer, which protects the earth from harmful ultraviolet rays.

Now the Japanese government has finally moved to address the pressing need to recover CFCs still in use. In September, the authorities agreed with industry on proposals for voluntary efforts to recover CFCs from products such as air conditioners in cars and refrigerators destined for the rubbish dump.

As the UN Conference on Climate Change gets under way in Kyoto this week, Japanese officials emphasise that the government has done everything required of it under the Montreal Protocol. That includes a total ban on production after 1995 and the gradual phasing out of substitute gases, such as hydrochlorofluorocarbons (HCFCs).

Japan has been more meticulous than most other countries in compiling data on the state of CFC recovery efforts, notes Motoharu Yamazaki, deputy director of the Environment Agency's Wide Area Atmospheric Protection Office.

"There are hardly any other countries, apart from Japan, that collect data on how much CFC is actually being recovered," he says.

Nevertheless, the authorities acknowledge that greater efforts need to be made towards the recovery of the ozone-depleting gases.

In contrast to many western countries, there is no legislation in Japan banning release of CFCs into the environment. The authorities must rely on the goodwill of users in industry as well as the general public to ensure that the gases do not escape into the atmosphere.

While CFCs have not been produced in Japan since 1995, there is still a considerable volume of the gases in use, particularly as coolants. The Ministry of International Trade and Industry calculates that the use of CFCs has fallen to about 180,000 tonnes a year, down 14 per cent from the peak in 1989.

The semiconductor industry, which was a substantial user of CFCs as a washing agent, has more or less completed the switch to HCFCs. Vehicle manufacturers have been using HFCs instead of CFCs for air conditioning since 1994, according to the Japan Automobile Manufacturers Association.

But vehicles made before 1994 are likely to contain CFCs in their air conditioning, which is a common feature of Japanese cars. "There are many companies that take the CFC out of the product – like car air conditioners – and put them into tanks, but do not know what to do with it," says Masataka Saburi, deputy director of the Ozone Layer Protection Office at Miti. "The facilities to decompose CFCs are expensive to use and some companies have even just thrown the tanks away," he says.

Climate change

Furthermore, CFCs are in wide use in commercial air conditioning. When buildings are torn down, the chances are that the CFCs in the air conditioning will escape into the air.

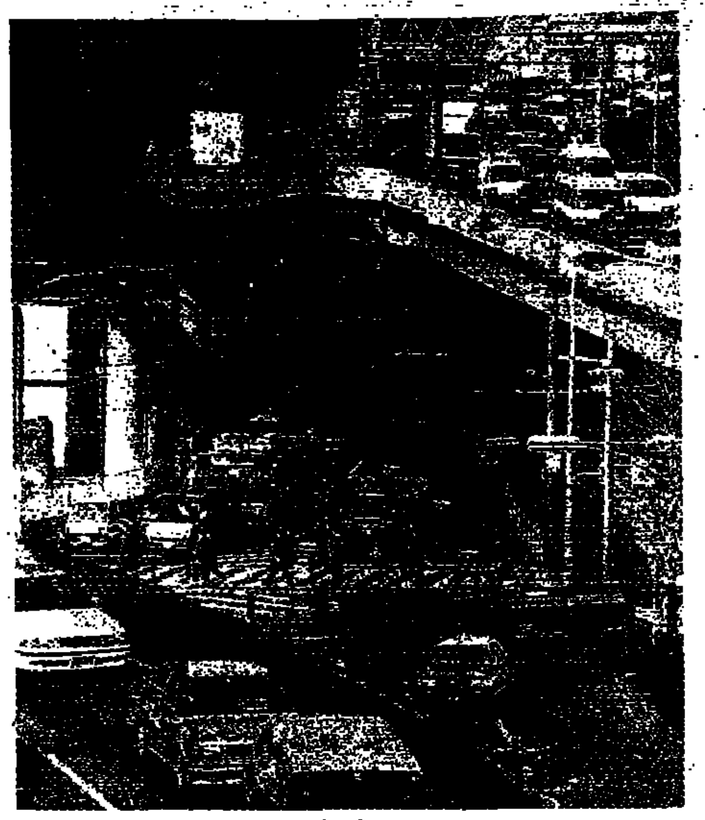
The Environment Agency estimates that about 44,000 tonnes of CFCs might be recovered from products in use. A further, unknown quantity, exists in the form of insulating material and other materials and cannot be readily recovered.

The bulk of the CFCs which can be recovered is in car air conditioners, which comprise 23,000 tonnes or 52 per cent of the total. Commercial refrigerators and air conditioners make up 34 per cent, or 15,000 tonnes, while home refrigerators account for 14 per cent, or 6,000 tonnes.

So far, Japan has focussed on encouraging recovery without the force of legislation. But the strategy has not been as successful as the authorities would have liked.

An environment ministry survey shows that while CFC is recovered from 57 per cent of home use refrigerators that are entrusted to local governments for disposal, the ratio falls to just 18 per cent for commercial refrigerators and air conditioners, 8.6 per cent for old refrigerators taken back by retailers, and a meagre 7.2 per cent for car air conditioners.

Mr Saburi at Miti points out that one of the difficulties has been the lack of infrastructure. Unless there is a relatively easy system for companies to have CFCs collected, transported and dealt with at facilities, they will not be encouraged to do so, he notes.


Central Tokyo: production of CFCs has been halted in Japan — Glyn Genin

The high cost of having the gases decomposed is another obstacle that has kept recovery levels low. "There is a need for incentives to encourage companies to recycle because if it is cheaper to throw it away than to recycle or have it decomposed, than our efforts won't work," he says.

So far, the Japanese authorities have remained lukewarm on the idea of introducing legislation to force companies to have used CFCs decomposed at special facilities. Even if legislation is introduced, without solving the problem of infrastructure and how to pay for recovery, legal enforcement will not be effective, Mr Saburi says. What's more, because CFC is a gas, there is no way to find out if anyone is breaking the rules, he points out.

It is relying on voluntary measures proposed by each industry to collect CFCs and have the gases decomposed. The burden of the cost will be shared between industry and users, with industry paying for the capital investment and users shouldering the cost of running the facilities.

Vehicle users, for example, will have to pay a fee when they trade in their car, to have the CFC in the air conditioning system taken to a facility and decomposed. Companies which supply air conditioning to commercial buildings will be held responsible for recovering the CFCs in the building when it is torn down, notes Mr Yamazaki at the Environment Agency.

Meanwhile, the Japanese government and industry have plenty of other related issues to deal with. HCFCs, used as a replacement for CFCs, will have to be phased out by 2030.

Of greater concern is the mounting momentum for a reduction in HFCs, which have been increasingly used as a CFC substitute. The global warming potential of HFCs is 1,300 times that of carbon dioxide.

There is a growing possibility that calls for a phased reduction in HFCs will arise at Kyoto. The problem is that "it is not at all easy to find replacements for HFCs," points out Touru Nagayama, section chief in the control and co-operation division of the Global Environment Department at the Environment Agency.

Costa Rica puts a price on CO_2

Caspar Henderson explains how 'carbon credits' could be used in climate negotiations

For at least as long as there have been markets, people have had a taste for exotic goods. But no ancient Phoenician trader could have dreamt that there might one day be an international market in a constituent of the atmosphere.

Now that may be turning into reality. Under the auspices of the United Nations Commission on Trade and Development, a pilot scheme to trade permits for carbon dioxide emissions is being created.

The aim is to establish by the middle of 2000 a mechanism to help nations find the most cost-effective way to reduce their emissions of this gas, thought to be the principal contributor to climate change.

Critics, which include business interests and environmental groups, say the Unctad scheme will face difficult if not insurmountable problems. The extent to which rich and industrialising countries should co-operate has been a stumbling block on the road to the Kyoto conference on climate change.

Amid this uncertainty the government of Costa Rica has seen an opportunity. It has created environmental bonds called Certified Tradable Offsets (CTOs), each of which corresponds to one ton of carbon "fixed" by Costa Rican forests (as trees grow they absorb carbon dioxide, release oxygen and use the carbon to build up their mass).

In the first publicly traded scheme of its kind, Norway has bought \$2m worth of CTOs at \$10 each. If the scheme takes off, countries which buy the bonds would use these carbon credits as a bargaining chip in international climate negotiations. Norway's aim, however, is to kickstart the market.

Money from the sale of CTOs will go to a revolving fund – also topped up by a domestic fossil fuel tax – for regeneration and protection of Costa Rica's forests. Reforestation is a central plank of the nation's sustainable development strategy: Costa Rica is one of the most deforested countries in Latin America. In the 1970s and 1980s tree felling was, ironically, supported with foreign aid.

Frank Joshua, head of the Unctad greenhouse gas emissions trading programme, welcomes the Costa Rican experiment: "It is quite valid ... but there are difficulties." A great deal of resistance remains to including carbon forest "sinks" in a basket of offset measures, he says. Some environmentalists, such as Greenpeace International's Bill Hare, have expressed doubts that CTOs could ever be credible. Up to now, he explains, there has been no international certification system to ensure that any extra trees planted will remain standing.

But Pedro Moura-Costa, managing director of Eco-Securities, a pioneer in offset brokering and management, says this concern is outdated. The CTOs will be guaranteed under a newly-created independent verification service for forestry offsets, he says. Eco-Securities developed the system with SGS Forestry, a division of the largest inspection, testing and monitoring organisation in the world.

In the Costa Rican scheme, "small farmers are provided with aid to maintain and harvest sustainably from forest land, and there are new mechanisms to make forestry more attractive than cattle ranching," says Mr Moura-Costa. Support will also go to improved demarcation and fire prevention for Costa Rica's national parks.

It is too soon to say whether Costa Rica's initiative will succeed, and whether it will stimulate other such carbon-trading schemes. David Harrison, a US economist, says the toughest challenge for any proposed carbon market would be how to allocate emissions allowances in a manner acceptable to both developing and developed countries.

But there has been a great deal of behind-the-scenes interest from other forested countries, according to Richard Sandor, chairman and chief executive of Chicago-based Centre Financial Products, which is helping to develop the Unctad scheme. A small but viable market is possible, he says.

"Once trading is going on I think we will see three things happen: prices [per ton of carbon offset] will fall below what models forecast; second, perceptions will change; and third, the market will motivate people to come up with additional cost-effective programmes. Perfection is impossible, but delay is unacceptable. Let us start now and improve as we go."

LEGAL NOTICE

IN THE MATTER OF
ACIOUS LIMITED
BOULTONS (PRENTON) LIMITED
CENTAUR CONSTRUCTION COMPANY LIMITED
CYKRO LIMITED
DISTRIBUTING ENGINEERS (BIRMINGHAM) LIMITED
ERIC ENTWISTLE LIMITED
IGRAM LIMITED
LAND UNITS LIMITED
MANORDALE SERVICES LIMITED
DOMEPICK LIMITED (formerly MCGREGOR (PAVING) LIMITED)
MOOLE LIMITED
NATCH LIMITED
NORWEST HOLST CIVIL ENGINEERING LIMITED
NORWEST HOLST GROUP ADMINISTRATION LIMITED
NORWEST HOLST INVESTMENTS LIMITED
NORWEST HOLST (KP) LIMITED
NORWEST HOLST LEISURE LIMITED
NORWEST HOLST MINING LIMITED
NORWEST HOLST OVERSEAS LIMITED
NORWEST HOLST PIPEWORK SERVICES LIMITED
NORWEST HOLST PLANT CONSTRUCTION LIMITED
NORWEST HOLST PROCESS ENGINEERING LIMITED
NORWEST HOLST PROPERTY AND FINANCIAL HOLDINGS LIMITED
RAKEIDOL LIMITED
ROBERTS & SLOSS LIMITED
ROSSER & RUSSELL
AGENE LIMITED (formerly SGE GROUPE LIMITED)
SOCEA (GREAT BRITAIN) LIMITED
THRIVEPAR LIMITED
TYLKE LIMITED
WALTER HOLME & SONS LIMITED
AND IN THE MATTER OF THE INSOLVENCY RULES 1986

In accordance with rule 4.106 of the Insolvency Rules 1986 notice is hereby given that Vivian Murray Barstow and Daniel Robert Whiteley Smith of Robson Rhodes, 186 City Road, London EC1V 2NU were appointed Joint Liquidators of the above companies by the members on 25 November 1997.

NOTICE IS ALSO HEREBY GIVEN that the creditors of the above named companies are required on or before the 31 day of December 1997 to send their names and addresses, with particulars of their debts and claims to the undersigned Vivian Murray Barstow and Daniel Robert Whiteley Smith of Robson Rhodes, 186 City Road, London EC1V 2NU the Joint Liquidators of the companies, and if so required by notice in writing from the Joint Liquidators either personally or by their solicitors, to come in and prove their debts or claims at such time and place as shall be specified in such notice and in default thereof they will be excluded from the benefit of any distribution made before such debts are proven.

Note: This notice is purely formal and all creditors have been or should be paid in full

Dated 26 day of November 1997

V M BARSTOW AND D R W SMITH Joint Liquidators

TENDER NOTICE
UK GOVERNMENT ECU TREASURY BILLS
For tender on 9 December 1997

1. The Bank of England announces the issue by Her Majesty's Treasury of ECU 1,000 million nominal of UK Government ECU Treasury Bills, for tender on a bid-yield basis on Tuesday, 9 December 1997. An additional ECU 50 million nominal of Bills will be allotted directly to the Bank of England for the account of the Exchange Equalisation Account.

2. The ECU 1,000 million of Bills to be issued by tender will be dated 11 December 1997 and will be in the following maturities:

ECU 200 million for maturity on 15 January 1998.
ECU 500 million for maturity on 12 March 1998.
ECU 300 million for maturity on 11 June 1998.

3. All tenders must be made on the printed application forms available on request from the Bank of England. Completed application forms must be lodged, by hand, at the Bank of England, Customer Settlement Services, Threadneedle Street, London not later than 10.30 a.m., London time, on Tuesday, 9 December 1997. Payment for Bills allotted will be due on Thursday, 11 December 1997.

4. Each tender at each yield for each maturity must be made on a separate application form for a minimum of ECU 500,000 nominal. Tenders above this minimum must be in multiples of ECU 100,000 nominal.

5. Tenders must be made on a yield basis (calculated on the basis of the actual number of days to maturity and a year of 360 days) rounded to two decimal places. Each application form must state the maturity date of the Bills for which application is made, the yield bid and the amount tendered for.

6. Notification will be despatched on the day of the tender to applicants whose tenders have been accepted in whole or in part. For applicants who have requested credit of Bills in global form to their account with ESO, Euroclear or CEDEL, Bills will be credited in the relevant systems against payment. For applicants who have requested definitive Bills, Bills will be available for collection at Customer Settlement Services, Bank of England after 1.30 p.m. on Thursday, 11 December 1997 provided cleared funds have been credited to the Bank of England's ECU Treasury Bills Account No. 59005516 with Lloyds Bank Plc, Bank Relations, St George's House, PO Box 787, 6-8 Eastcheap, London EC3M 1LL. Definitive Bills will be available in amounts of ECU 10,000, ECU 50,000, ECU 100,000, ECU 500,000, ECU 1,000,000, ECU 5,000,000 and ECU 10,000,000 nominal.

7. Her Majesty's Treasury reserves the right to reject any or part of any tender.

8. The arrangements for the tender are set out in more detail in the Information Memorandum on the UK Government ECU Treasury Bill programme issued by the Bank of England on behalf of Her Majesty's Treasury on 28 March 1989, and in supplements to the Information Memorandum. All tenders will be subject to the provisions of the Information Memorandum (as supplemented) and to the provisions of this notice.

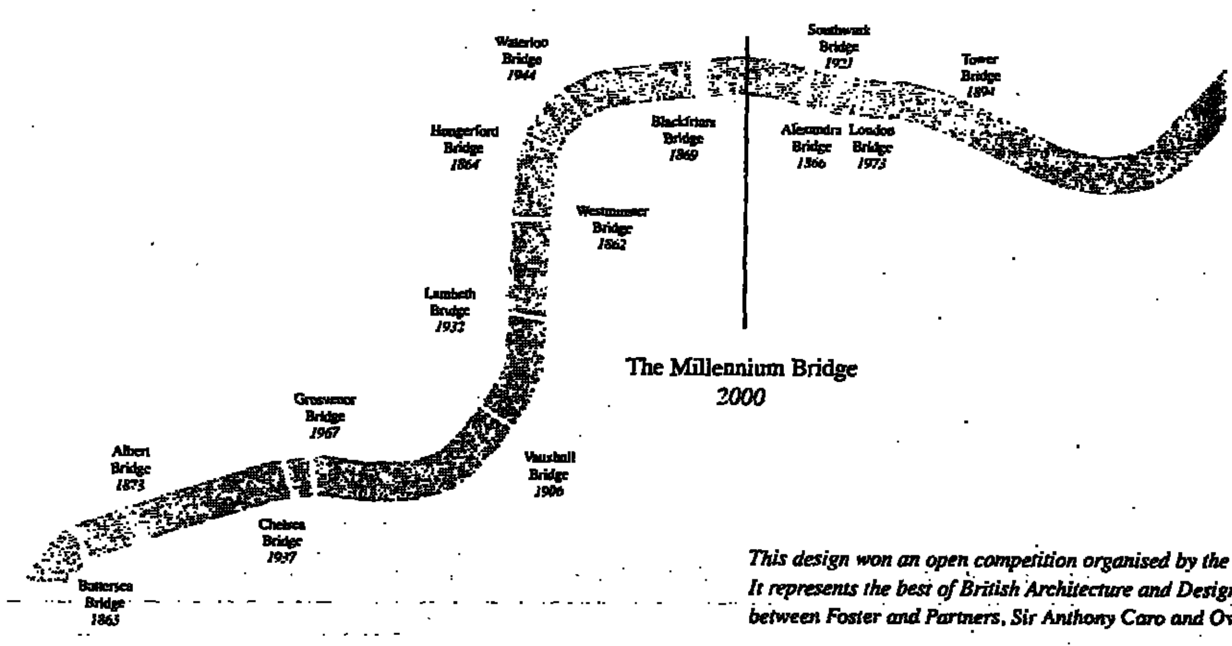
9. The ECU 50 million of Bills to be allotted directly to the Bank of England for the account of the Exchange Equalisation Account will be for maturity on 11 June 1998. These Bills may be made available through sale and repurchase transactions to the market makers listed in the Information Memorandum (as supplemented) in order to facilitate settlement.

10. Copies of the Information Memorandum (and supplements to it) may be obtained at the Bank of England. UK Government ECU Treasury Bills are issued under the Treasury Bills Act 1877, the National Loans Act 1968 and the Treasury Bills Regulations 1968 as amended.

Bank of England
2 December 1997

هكذا من الاعلان

It's only a short walk into our future



This design won an open competition organised by the RIBA.
It represents the best of British Architecture and Design and is the result of collaboration between Foster and Partners, Sir Anthony Caro and Ove Arup and Partners

...The Financial Times is very pleased to announce the formation of the Millennium Bridge Trust.

This is the stunning design for London's first new river crossing in a century.
It presents both public and private organisations with an opportunity to contribute funds and secure a place in history.

The Millennium Bridge is for pedestrians only, and links St. Paul's Cathedral to the new Tate Gallery of Modern Art, a meeting of ancient and modern, spiritual and temporal, which could not be more appropriate to the event it commemorates.

With the support of the Financial Times, whose Chairman David Bell heads the Millennium Bridge Trustees, and with financial help from J.Sainsbury plc and the Cross River Partnership the project has secured a grant of £7.1 million from the Millennium Commission. As it moves to completion in the Spring of the year 2000 it will stand as a lasting testament to the spirit of the age.

As a bridge for the people, a link for London and a symbol for Britain, this new Millennium Bridge provides a short walk into a long and prosperous future.

For further details contact the Project Director, Malcolm Reading, on 0181 741 4381.

a BRIDGE for people a LINK for London a SYMBOL for Britain
THEMILLENNIUMBRIDGE

A MILLENNIUM PROJECT
SUPPORTED BY FUNDS FROM THE NATIONAL LOTTERY

FINANCIAL TIMES
No FT, no comment.

INTERNATIONAL CAPITAL MARKETS

Germany leads European sector higher

GOVERNMENT BONDS

By Simon Davies in London and John Labate in New York

European bond markets moved strongly higher on a quiet day, with few thoughts that Alan Greenspan, the Federal Reserve chairman, would choose to reignite fears of "irrational" markets in a speech in New York last night.

Mr Kit Juckes, bond strategist at NatWest, said: "This is a very bond-friendly environment for European bonds. Europe has virtually no inflationary pressures at all," and certainly continuing bad news from Asia has pointed to slower growth rates in the west.

However, there are few economic statistics to provide further impetus for bonds this week, apart from the US non-farm payroll numbers due on Friday.

Germany led the way yesterday, but other European markets followed, and spreads against bunds were mostly unchanged in the cash markets.

On the London International Financial Futures and Options Exchange, the December BUND contract closed above the 104 level for the first time. It settled 0.29 points higher at 104.27, just 0.06 off the day's high. About 170,000 contracts were traded.

Mr Juckes said that a stronger D-Mark, and competitive pressures from Asia following recent currency devaluations and dwindling domestic demand, would stifle exports – one of Germany's few buoyant sectors.

"The bund yield should be at 5 per cent," Mr Juckes argued, compared with the current yield of 5.4 per cent in the cash market.

FRENCH OATs also pushed higher, with the December contract settling at 100.54, 0.24 points higher. In the cash market, bonds moved in line with bunds, with the adjusted yields remaining identical.

In the UK GILTS market, volumes have already shifted in favour of the March contract, which settled ¼ higher at 120, but trading remained extremely subdued, with only 43,000 March contracts traded.

The pick-up in bond futures came mostly in the afternoon, with Germany providing much of the inspiration.

In the cash market, the yield spread against bunds narrowed by one basis point, to 116.

There is still some concern about the possibility that the UK's monetary policy committee could opt for a final rate increase for the year when it meets tomorrow.

The short sterling market is still projecting another increase, but the consensus among economists is firmly in favour of no move before next year.

Meanwhile, trading remained quiet, even in the newly launched gilt strips market.

Traders said that news that the UK could be kept out of the so-called "Euro-club" for members of European monetary union, would have little impact on market sentiment.

However, if tensions increase considerably, it could put pressure on some of the peripheral potential members of Emu, such as Italy and Spain.

ITALIAN BTPs hit new highs yesterday, encouraged by rises in Germany and also by hopes that the November inflation data, due to be published tomorrow, could provide the Bank of Italy with its excuse to cut interest rates.

The December contract in London gained 0.23 points to settle at 114.14, but this was 0.10 off its high for the day.

SPANISH BONOs also rallied, settling 0.17 higher at 105.32.

US TREASURIES were little moved in early trading by the release of data on leading indicators. By midday the benchmark 30-year Treasury bond was $\frac{1}{32}$ higher at 101¼, sending the yield lower at 6.034 per cent.

The 10-year note was unchanged at 101$\frac{19}{32}$, yielding 5.855 per cent, while the two-year note was also unchanged at 99$\frac{29}{32}$, yielding 5.776 per cent.

"It's very quiet, with the market maintaining a tight trading range," said Marcello Frustaci, senior vice-president and trading manager at Daiwa Securities in New York.

Bond analysts are waiting for the release of November unemployment figures on Friday. The leading indicator figure for October was a gain of 0.2 per cent, in line with expectations.

Investors were also braced for Mr Greenspan's comments yesterday evening on the state of the markets, at his annual speech to the New York economics club. The Fed chairman's speech a year ago rocked US markets with its remarks about "irrational exuberance".

Analysts are also watching the yield curve – the spread between the two-year note and the 30-year bond – which has continued to flatten in recent weeks as investors choose long-term issues over shorter-term ones.

In light trading the spread narrowed to slightly more than 25 basis points.

CAPITAL MARKETS NEWS DIGEST

Saudi banks seek to launch funds

Several Saudi Arabian banks have filed applications with the country's central bank to launch foreign equity investment funds, according to local bankers.

The move by the banks, including National Commercial Bank and Riyad Bank, follows the launch in August by Saudi American Bank, which is 30 per cent owned by Citibank, of the US, of a $250m closed-end fund aimed at foreign investors. The fund is the only vehicle through which foreigners can access the Saudi market.

The Saudi Arabian Monetary Agency, eager to avert market volatility, will be moving cautiously. Bankers say the agency is not likely to give approval in the short term to more than one additional fund.

The Saudi market is the largest in the Arab world, with a capitalisation of about $57bn. But the over-the-counter market has often been criticised for being prone to price manipulation, a claim denied by local brokers. Only 70 companies are listed and listing rules are such that initial public offerings are a rarity.

Like most Middle East markets, the Saudi market has held up well during the Asian crisis – it is up 25 per cent this year – but returns since 1994 compare poorly with Egypt and Morocco. Ron Freeman, managing director at Salomon Brothers, told a London conference this week organised by the Arab Bankers Association that the poor showing of the Saudi market in recent years was the result of its lack of openness.

Roula Khalaf

■ WILLIAM HILL PURCHASE

Nomura secures £400m loan

Nomura yesterday secured a £400m syndicated loan to finance part of its recent £700m acquisition of William Hill, the UK betting business, from Brent Walker.

The loan was arranged by Bankers Trust, which is also planning to launch a sterling-denominated high-yield bond for William Hill. The bonds will probably be sold in the first quarter of next year, after William Hill releases its financial accounts for 1997. The bond issue would raise more than £150m, making it the biggest UK junk bond issue.

The syndicated loan has been launched in three tranches with an additional £50m revolving credit. The first tranche, of £175m, has been priced at 175 basis points over Libor, a second tranche of £100m is priced at 200 points, and a final £70m tranche at 225 basis points over Libor. The blended cost to Nomura is just under 200 basis points over Libor.

The William Hill acquisition is the latest of a substantial series of deals by Nomura's principal finance group, which has invested over £6bn in the past two-and-a-half years.

Nomura has retained the betting group's former management and is likely to refinance the business in two to three years time, either through a longer-term securitisation, or a flotation.

Simon Davies

Russian $200m add-on gives signs of recovery

INTERNATIONAL BONDS

By Edward Luce and Samer Iskandar

The eurobond market was again dominated by a flurry of small and niche-targeted deals yesterday as well as a $200m add-on to Russia's recent five-year dollar bond.

The Russian add-on, which was lead managed by SBC Warburg, was priced at a spread of 15 basis points over five-year Treasuries, compared with an initial launch spread of 20 basis points.

"This indicates the gradual recovery we are seeing in the market," one official said.

Unlike the first tranche, which was popular with central banks and larger institutional funds, yesterday's add-on was mostly distributed to medium-size funds and retail buyers.

DUTCH NBS, a special purpose vehicle, was brought out by Bear Stearns and De NIB – only the third mortgage-backed bond to be denominated in guilders.

The Fl 956m offering, which was split into two deals and four tranches, was structured as a "pass-through" bond. This means that the principal repayments are passed directly through to the investor.

The bonds, which were priced at spreads of between 35 basis points and 46 basis points over the Dutch curve, have monthly coupon payments.

Roughly one-third of the offering went outside the Netherlands. The mortgages were held by Bouwfonds Hypotheken, a Dutch building society, and Stad Rotterdam, a Dutch insurer.

GREECE issued L500bn of seven-year notes in the Italian market. The coupon was set at 5.9 per cent, but steps next year to 6.1 per cent and rises again two years later. At the re-offer price of 99.55, the bonds yield 46 basis points over London inter-bank rates on the lira.

Credito Italiano, one of the lead managers, said that the deal had been warmly received by institutional investors and that it expected retail interest to follow.

Several high-yield issues are believed to be in the pipeline, possibly to be launched before the end of the month. Traders said a French franc issue by Groupe André, France's largest shoe maker, might be imminent.

New international bond issues

Borrower	Amount m.	Coupon %	Price	Maturity	Fees %	Spread bp	Book-runner
■ US DOLLARS							
World Bank(a)	200	6.00	99.71R	Dec 2002	0.25R	+15(5¾%Nov02)	SBCWDR
Inter-American Dev Bank+	50	5.52#	99.50	Dec 2000	0.20	-	SBCWDR
■ D-MARKS							
North Rhine Westphalia	400	6.00(l)	100.00R	Jan 2018	0.40R	+20(6%Jun16)	Barclays Capital(Deutsch)
■ SWISS FRANCS							
DSL Bank(b)	150	3.00	101.95	Dec 2002	2.00	-	CSFB
■ ITALIAN LIRE							
Hellenic Republic(c)	500bn	(c1)	100.00	Dec 2004	undiscl	-	(c2)
Merrill Lynch & Co‡	250bn	(d)	99.70r	Jan 2008	0.50r	-	Caboto/Cariplo/Merrill
Dresdner Finance	200bn	(e)	99.74r	Jan 2008	0.10r	-	BCI/BNL/IMI Luxembourg
Nordic Investment Bank‡	150bn	(f)	99.50r	Jan 2009	0.467r	-	BCI/JP Morgan Secs
■ GUILDERS							
Dutch MBS 1997-I, Cls A(g1)	398	5.50(s)	99.817R	Oct 2007	0.32R	+46(l)	Bear Stearns/De NIB
Dutch MBS 1997-II, A1(g2)	105	4.50(s)	99.893R	Nov 2007	0.1875R	+35(7¼Jun99)	Bear Stearns/De NIB
Dutch MBS 1997-II, A2(g3)	453	5.50(s)	99.672R	Nov 2007	0.33R	+45(l)	Bear Stearns/De NIB
Albert Heijn	300	5.875	100.16R	Dec 2007	0.425R	+40(l)	ABN Amro Hoare Govett
Koninklijke Ahold	200	5.875	99.61R	Dec 2005	0.425R	+60(l)	ING Barings
■ CANADIAN DOLLARS							
Ford Credit Canada	100	5.875(s)	99.94R	Dec 2003	0.30R	+58(5½Sep02)	TD Securities

Final terms, non-callable unless stated. Yield spread (over relevant government bond) at launch supplied by lead manager. +Unlisted. §Convertible. ¢With equity warrants. ‡ Floating-rate note. #Semi-annual coupon. R: fixed re-offer price; fees shown at re-offer level. a) $300m launched 18/11/97 was increased to $500m. b) SFr150m launched Monday was increased to SFr300m. c) Domestic deal. c1) 5.9% in 1st yr, 6.1% in yrs 2-3, then 6.35%. c2) Joint bookrunners: Banca Popolare di Novara, Banco Profilo, Crediop and Credito Italiano. d) 13% in 1st yr, then 8% in yrs 2-3, then 15½% - 2 x 12-mth Libor. e) 7% to 7/1/00, then 5.3%. f) 12% in 1st yr, then 7% in yrs 2-3, then 15½% - 2 x 12-mth Libor. g) Monthly coupons. Average lives: g1) 6.6 yrs; g2) 1.5 yrs; g3) 7.0 yrs. g4) 97-II, Class B: Fl 30m, 5⅞%, 99.424R, 9½ yrs, +70(l). l) Over interpolated yield. ll) Long 1st coupon. r) Recommended re-offer. s) Short 1st coupon.

WORLD BOND PRICES

BENCHMARK GOVERNMENT BONDS

Dec 2	Red Date	Coupon	Bid Price	Bid Yield	Day chg yield	Wk chg yield	Month chg yld	Year chg yld
Australia	03/99	6.250	101.2460	5.22	+0.04	+0.19	+0.39	-1.09
	10/07	10.000	127.0240	6.24	+0.03	+0.22	+0.30	-0.82
Austria	09/99	7.000	104.1900	4.50	+0.02	+0.02	-	+0.72
	07/07	5.625	100.9000	5.50	-0.03	-0.05	-0.15	-0.20
Belgium	04/99	7.000	103.6300	4.25	-0.02	-0.03	-0.10	+0.94
	03/07	6.250	104.8500	5.56	-0.03	-0.05	-0.18	-0.21
Canada	03/99	4.000	99.5200	4.38	-0.06	+0.20	+0.46	+0.72
	06/07	7.250	112.3000	5.54	-0.03	+0.07	+0.07	-0.50
Denmark	12/99	6.000	102.4400	4.70	+0.02	-0.03	-0.09	+0.53
	11/07	7.000	108.1300	5.90	-0.02	-0.04	-0.25	-0.64
Finland	01/99	11.000	107.1890	4.22	-0.03	-0.03	-0.16	+0.40
	04/06	7.250	110.6740	5.61	-0.03	-0.06	-0.20	-0.65
France	11/99	7.000	104.9000	4.30	-0.01	-0.01	-0.06	+0.74
	10/04	6.750	109.0400	5.15	-0.03	-0.04	-0.13	+0.07
	10/07	5.500	100.6800	5.41	-0.03	-0.06	-0.18	-0.18
	10/25	6.000	100.6500	5.95	-0.05	-0.08	-0.25	-0.60
Germany	06/99	3.500	98.9400	4.22	+0.04	+0.05	+0.02	+0.80
	07/04	6.750	108.4800	5.19	-0.04	-0.05	-0.09	-0.10
	07/07	6.000	104.2700	5.41	-0.04	-0.06	-0.17	-0.21
	07/27	6.500	106.9900	5.99	-0.04	-0.08	-0.22	-0.54
Ireland	04/99	6.250	101.3300	5.16	-0.05	-0.14	-0.24	-0.59
	08/06	8.000	114.7800	5.78	-0.05	-0.12	-0.28	-0.73
Italy	05/00	6.000	102.0600	5.09	-	-0.08	-0.33	-1.40
	05/02	6.250	103.3700	5.38	-0.02	-0.07	-0.30	-1.44
	07/07	6.750	106.9100	5.80	-0.03	-0.09	-0.37	-1.73
	11/26	7.250	112.8000	6.28	-0.07	-0.15	-0.40	-1.79
Japan	06/99	4.800	106.6700	0.43	+0.03	+0.13	-0.05	-0.29
	12/02	4.800	117.1400	1.27	+0.01	+0.09	+0.03	-0.45
	09/05	3.000	108.8300	1.78	+0.01	+0.04	+0.10	-0.57
	03/17	3.500	112.8800	2.64	-	+0.01	+0.17	-0.55
Netherlands	06/99	7.500	104.5800	4.31	+0.01	+0.02	-0.01	+0.87
	02/07	5.750	102.5500	5.39	-0.03	-0.05	-0.17	-0.19
New Zealand	02/00	6.500	99.0636	6.96	+0.04	+0.02	+0.10	+0.15
	11/06	8.000	108.4975	6.70	-0.02	+0.08	+0.18	-0.26
Norway	01/99	9.000	105.0800	4.38	-0.04	-	-0.12	-0.21
	01/07	6.750	108.3500	5.55	-0.04	-0.05	-0.25	-0.70
Portugal	03/99	8.500	104.4643	4.84	-0.05	-0.06	-0.20	-1.36
	02/07	6.625	105.8073	5.79	-0.04	-0.07	-0.23	-1.21
Spain	07/99	7.400	104.2492	4.64	-0.01	-0.03	-0.20	-1.28
	03/07	7.350	111.5573	5.71	-0.03	-0.07	-0.27	-1.24
Sweden	01/99	11.000	106.1890	5.19	-0.02	+0.08	+0.10	+0.14
	08/07	8.000	113.0090	6.17	-0.02	-0.05	-0.20	-0.86
Switzerland	03/99	4.000	102.7500	1.77	-0.13	-0.23	-0.25	-0.40
	06/07	4.500	107.8500	3.51	+0.01	-	-0.06	-0.40
UK	08/99	6.000	98.2968	7.08	+0.02	+0.08	+0.24	+0.46
	11/04	6.750	100.8203	6.60	-0.03	-0.03	+0.02	-0.55
	12/07	7.250	106.6563	6.47	-0.03	-0.06	-0.07	-0.87
	06/21	8.000	119.7266	6.37	-0.03	-0.07	-0.10	-1.09
US	07/99	5.875	100.1090	5.80	-0.01	+0.05	+0.16	+0.20
	05/04	7.250	107.3440	5.87	+0.01	-	+0.03	+0.03
	08/07	6.125	101.9220	5.86	+0.01	+0.01	+0.03	-0.20
	08/27	6.375	104.0230	6.08	-	-0.02	-0.07	-0.28
ECU	03/99	5.000	100.4300	4.63	-0.01	-	-0.04	+0.51
	04/07	5.500	99.5600	5.56	-0.04	-0.08	-0.20	-0.44

London closing. *New York mid-day. Source: Interactive Data/FT Information. Yields: Local market standard/Annualised yield basis. Yields shown for Italy exclude withholding tax at 12.5 per cent payable by nonresidents.

10 YEAR BENCHMARK SPREADS

Dec 2	Bid Yield	Spread vs Bunds	Spread vs T-Bonds
Australia	6.24	+0.83	-0.38
Austria	5.50	+0.09	-0.36
Belgium	5.56	+0.15	-0.30
Canada	5.54	+0.13	-0.32
Denmark	5.90	+0.49	+0.04
Finland	5.61	+0.20	-0.25
France	5.41	-	-0.45
Germany	5.41	-	-0.45
Ireland	5.78	+0.37	-0.08
Italy	5.80	+0.39	-0.06
Japan	1.78	-3.63	-4.08
Netherlands	5.39	-0.02	-0.47
New Zealand	6.70	+1.29	+0.84
Norway	5.56	+0.15	-0.30
Portugal	5.79	+0.38	-0.07
Spain	5.71	+0.30	-0.15
Sweden	6.17	+0.76	+0.31
Switzerland	3.51	-1.90	-2.35
UK	6.47	+1.06	+0.61
US	5.86	+0.45	-
ECU	5.56	+0.15	-0.30

Source: Interactive Data/FT Information. London closing. * New York closing. Annualised yield basis.

EMERGING MARKET BONDS

Dec 2	Red date	Coupn	S & P Rating	Bid price	Bid yield	Day's chge yld	Mth's chge yld	Sprd vs US
■ EUROPE								
Croatia	02/02	7.000	BBB-	95.3913	8.31	-0.26	-0.13	+2.49
Poland	07/00	7.750	BBB-	101.9984	6.86	+0.16	+0.48	+1.06
Russia	11/01	9.250	BB-	95.1822	10.80	-0.01	-0.04	+4.99
■ LATIN AMERICA								
Argentina	01/17	11.375	BB	108.0000	10.39	-0.27	-1.10	+4.44
Brazil	11/01	8.875	BB-	98.5321	9.33	-0.30	+0.68	+3.52
Mexico	01/07	9.875	BB	106.1734	8.87	-0.38	-0.52	+3.01
■ ASIA								
China	07/06	7.750	BBB+	105.3739	6.89	-0.02	-0.58	+1.04
Philippines	10/16	8.750	BB+	88.5467	10.12	-	+0.15	+4.18
Thailand	04/07	7.750	A-	87.6072	9.82	-0.19	-0.06	+3.96
■ AFRICA/MIDDLE EAST								
Lebanon	07/00	9.125	BB-	103.0087	7.79	-0.11	-0.08	+1.99
South Africa	12/99	9.625	BB+	104.7447	7.07	-0.09	-0.55	+1.29
Turkey	05/02	10.000	B	100.9880	9.72	+0.13	-0.45	+3.90
■ BRADY BONDS								
Argentina	03/23	5.500	BB	72.8800	8.61	-0.25	-0.30	+2.61
Brazil	04/24	5.250	BB-	70.7624	8.77	-0.27	-0.43	+2.76
Mexico	12/19	6.250	BB	82.5257	7.94	-0.25	-0.03	+1.97
Venezuela	03/20	6.750	B+	87.0729	8.00	+0.01	-0.39	+2.02

London closing. Prices in US$. Standard & Poor's ratings. Source: Interactive Data/FT Information.

BOND FUTURES AND OPTIONS

France

■ NOTIONAL FRENCH BOND FUTURES (MATIF) FFr500,000

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	100.46	100.54	+0.24	100.62	100.44	105,615	98,493
Mar	99.94	100.04	+0.26	100.12	99.94	33,578	33,911
Jun	99.36	99.46	+0.26	99.36	99.36	2	12

■ LONG TERM FRENCH BOND OPTIONS (MATIF)

Strike Price	CALLS Dec	CALLS Jan	CALLS Mar	PUTS Dec	PUTS Jan	PUTS Mar
97	3.14	2.66	2.85	-	0.02	0.23
98	2.14	1.70	2.03	-	0.06	0.41
99	1.15	0.85	1.33	0.01	0.21	0.69
100	0.20	0.29	0.77	0.06	0.64	1.13
101	0.01	0.06	0.39	0.87	1.42	1.74

Est. vol. total, Calls 28,552 Puts 28,834. Previous day's open int., Calls 103,012 Puts 132,436.

Germany

■ NOTIONAL GERMAN BUND FUTURES (LIFFE)* DM250,000 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	103.95	104.27	+0.29	104.33	103.93	169919	188141
Mar	103.21	103.57	+0.28	103.62	103.20	87768	85151

■ BUND FUTURES OPTIONS (LIFFE) DM250,000 points of 100%

Strike Price	CALLS Jan	CALLS Feb	CALLS Mar	CALLS Jun	PUTS Jan	PUTS Feb	PUTS Mar	PUTS Jun
10350	0.42	0.71	0.92	1.08	0.35	0.64	0.85	1.71
10400	0.20	0.48	0.68	0.89	0.63	0.91	1.11	2.02
10450	0.08	0.29	0.48	0.72	1.01	1.22	1.41	2.35

Est. vol. total, Calls 16215 Puts 20257. Previous day's open int., Calls 111117 Puts 108748

■ NOTIONAL GERMAN BUND (BOBL) FUTURES (DTB) DM250,000 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	104.03	104.13	+0.10	104.16	104.00	94,211	213,508
Mar	103.38	103.49	+0.11	103.50	103.38	42,691	75,945

■ NOTIONAL GERMAN BOBL FUTURES (LIFFE)* DM250,000 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	104.07	104.04	-0.01	104.07	103.99	4,649	12,313
Mar	103.42	103.38		103.38	103.34	1,256	4,319

Italy

■ NOTIONAL ITALIAN GOVT. BOND (BTP) FUTURES (LIFFE)* Lira 200m 100ths of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	114.05	114.14	+0.23	114.24	114.05	71185	71878
Mar	114.60	114.62	+0.23	114.74	114.57	69240	57736

■ ITALIAN GOVT. BOND (BTP) FUTURES OPTIONS (LIFFE) Lira200m 100ths of 100%

Strike Price	CALLS Mar	CALLS Jun	PUTS Mar	PUTS Jun
11450	1.04	1.54	0.92	1.42
11500	0.78	1.30	1.16	1.68
11550	0.57	1.09	1.45	1.97

Est. vol. total, Calls 5303 Puts 4584. Previous day's open int., Calls 22019 Puts 28145

Spain

■ NOTIONAL SPANISH BOND FUTURES (MEFF)

	Open	Sett price	Change	High	Low	Est. vol.	Open int.
Dec	105.25	105.32	+0.16	105.35	105.20	36,375	102,283
Mar	104.86	104.87	+0.17	104.88	104.80	2,584	9,098

UK

■ NOTIONAL UK GILT FUTURES (LIFFE)* £50,000 32nds of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	119-06	119-10	+0-10	119-11	118-31	16794	59823
Mar	119-30	120-00	+0-08	120-03	119-23	43241	139449

■ LONG GILT FUTURES OPTIONS (LIFFE) £50,000 64ths of 100%

Strike Price	CALLS Dec	CALLS Jan	CALLS Feb	CALLS Mar	PUTS Dec	PUTS Jan	PUTS Feb	PUTS Mar
120	0-46	1-10	1-30	0	0-46	1-10	1-30	15-40
121	0-20	0-47	1-00	0	1-20	1-47	2-00	16-40
122	0-08	0-27	0-43	0	2-08	2-27	2-43	17-40

Est. vol. total, Calls 3742 Puts 4101. Previous day's open int., Calls 38034 Puts 19570

Ecu

■ ECU BOND FUTURES (MATIF) ECU100,000

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	99.38	99.80	+0.20	99.80	99.38	1,144	7,857
Mar	-	99.34	+0.20	-	-	-	679

US

■ US TREASURY BOND FUTURES (CBT) $100,000 32nds of 100%

	Open	Latest	Change	High	Low	Est. vol.	Open int.
Dec	119-16	119-08	-0-01	119-11	119-02	48,210	247,455
Mar	119-02	119-03	-	119-08	118-29	211,189	433,725
Jun	118-27	118-26	+0-01	118-27	118-20	175	14,757

Japan

■ NOTIONAL LONG TERM JAPANESE GOVT. BOND FUTURES (LIFFE) Y100m 100ths of 100%

	Open	Close	Change	High	Low	Est. vol	Open int.
Dec	130.22			130.26	130.18	4012	na
Mar	129.22			129.29	129.21	4107	na

* LIFFE futures also traded on APT. All Open interest figs. are for previous day.

US CORPORATE BONDS

Dec 1	Red date	Coupon	S & P Rating	Bid price	Bid yield	Day's chge yld	Mth's chge yld	Sprd v Govts
■ UTILITIES								
Pac Bell	07/02	7.25	AA-	103.7532	6.29	-9.99	+0.03	+0.45
NY Tel	08/25	7.00	A+	97.9025	7.17	-9.99	-0.02	+1.12
CWE	05/08	8.00	BBB	108.5278	6.84	-9.99	-0.02	+0.97
■ FINANCIALS								
GECC	05/07	8.75	AAA	116.1996	6.43	-9.99	-0.01	+0.56
Banc One	08/02	7.25	A+	103.5446	6.35	-9.99	+0.05	+0.51
US West	01/07	7.30	BBB+	102.5497	6.91	-9.99	-0.05	+1.04
■ INDUSTRIALS								
WMX Tech	04/99	6.25	A-	99.5773	6.57	-9.99	+0.44	+0.80
Wal Mart	05/02	6.75	AA	101.8901	6.25	-9.99	+0.03	+0.41
Dayton Hud	06/21	9.70	BBB+	128.7980	7.15	-9.99	-0.14	+1.10
■ AGENCIES								
FHLMC	04/07	7.14	N/A	106.6380	6.16	-9.99	-0.02	+0.29
SLMA	03/00	7.50	N/A	103.2738	5.98	-9.99	+0.12	+0.12
FNMA	02/18	8.95	N/A	127.9623	6.45	-9.99	-0.15	+0.40
FFCB	06/06	8.95	N/A	118.1568	6.17	-9.99	-0.01	+0.30
■ HIGH YIELD								
Stone Cont	02/01	9.88	B	101.7500	0.00	-	-	-
AK Stl	12/01	9.13	BB-	103.2500	0.00	-	-	-
Pacalta	05/04	10.75	B-	99.1250	0.00	-	-	-

New York closing. Source: Interactive Data/FT Information. Standard & Poor's ratings. Yields: semi-annual basis.

US INTEREST RATES

Latest

		Treasury Bills and Bond Yields			
Prime rate	8½	One month	-	Two year	5.78
Broker loan rate	7¼	Two month	-	Three year	5.80
Fed.funds	5⅝	Three month	5.24	Five year	5.83
Fed.funds at intervention	5¾	Six month	5.45	10-year	5.86
		One year	5.54	30-year	6.04

INTERNATIONAL BONDS

Dec 2	Red date	Coupon	S & P Rating	Bid price	Bid yld	Day's chge yld	Mth's chge yld	Spread v Govts
■ EURO DM								
EIB	02/07	5.750	AAA	101.9900	5.47	-0.04	-0.18	+0.06
Spain	01/07	5.750	AA	101.3000	5.56	-0.04	-0.19	+0.15
Philip Morris	03/04	6.375	A	98.7700	5.61	-0.01	-0.05	+0.42
ABN Amro FRN	03/05	3.625	n/a	99.6298	5.43	-0.03	-0.12	+0.13
■ EURO FFR								
Austria	01/04	5.500	AAA	101.6600	5.17	-0.03	-0.17	+0.01
Abbey Nat	02/04	6.000	AA	103.7000	5.28	-0.05	-0.09	+0.12
Cred Foncier	02/04	9.125	A	117.6500	5.67	-0.02	-0.04	+0.51
Abbey Nat FRN	09/06	4.510	n/a	101.8794	4.25	-0.03	-0.17	-1.07
■ EURO LIRA								
EIB	02/07	7.000	AAA	108.9000	5.72	-0.04	-0.32	-0.08
Abbey Nat	02/02	6.800	AA	104.9000	5.46	-0.02	-0.31	+0.08
Walt Disney	08/00	8.625	n/a	107.3200	5.44	-0.01	-0.38	+0.35
Abbey Nat FRN	03/07	8.000	AAr	104.2441	6.80	-0.01	-0.84	+1.00
■ EURO £								
EIB	12/07	7.625	AAA	105.6977	6.82	-0.03	-0.05	+0.35
Dresdner Bk	12/07	7.750	AA-	103.6136	7.23	-0.03	+0.11	+0.76
RBS	01/07	8.375	A+	106.3486	7.39	-0.03	+0.04	+0.92
Abbey Nat FRN	02/02	7.830	AA	100.0339	6.74	-0.02	+0.07	-0.02
■ EURO $								
EIB	04/07	7.250	AAA	106.7441	6.27	-	-0.02	+0.41
ABN Amro	06/07	7.125	AA-	103.8832	6.57	-0.02	-	+0.71
Quebec	01/07	7.000	A+	102.8417	6.58	-0.01	-0.01	+0.72
Citicorp FRN	02/04	5.938	A+	99.5218	6.03	-	+0.20	+0.19
■ EURO C$								
Bayer L-Bk	08/04	9.500	AAA	119.7942	5.83	-0.10	+0.10	+0.18
Toronto	05/04	8.500	AA+	114.4684	5.75	-0.07	+0.09	+0.10
Bell Canada	07/99	10.625	A+	108.0533	5.24	-	+0.32	+0.17
Deutsche B FRN	09/02	5.875	AAA	101.5546	5.50	-0.06	+0.16	-0.01
■ EURO YEN								
World Bank	03/02	5.250	AAA	117.4800	1.07	+0.02	-0.08	-0.03
Spain	03/02	5.750	AA	119.2500	1.14	+0.03	-0.05	+0.04
Cred Foncier	08/02	4.750	A	114.1293	1.58	+0.02	+0.01	+0.49
Italy FRN	07/99	0.594	AA	100.3655	0.26	+0.03	-	-0.17

London closing. Source: Interactive Data/FT Information. Standard & Poor's ratings. Yields: Local market standard/Annualised basis.

UK BONDS

FTSE Actuaries Govt. Securities

Price Indices UK Gilts	Tue Dec 2	Day's change %	Mon Dec 1	Accrued interest	xd adj. ytd
1 Up to 5 years (19)	118.76	0.04	118.72	1.62	10.39
2 5-15 years (20)	156.61	0.21	156.29	1.52	11.88
3 Over 15 years (4)	188.73	0.33	188.11	0.88	14.12
4 Irredeemables (4)	230.68	0.48	229.57	1.25	14.48
5 All stocks (47)	149.64	0.17	149.39	1.50	11.88
Index-linked					
6 Up to 5 years (2)	211.49	0.04	211.40	1.04	6.09
7 Over 5 years (10)	215.86	0.06	215.74	1.44	5.76
8 All stocks (12)	214.34	0.06	214.21	1.39	5.76

UK Indices

	Low coupon yield Dec 2	Dec 1	Yr. ago	Medium coupon yield Dec 2	Dec 1	Yr. ago	High coupon yield Dec 2	Dec 1	Yr. ago
5 yrs	6.68	6.70	7.06	6.78	6.80	7.11	6.82	6.83	7.15
15 yrs	6.48	6.52	7.50	6.43	6.48	7.47	6.52	6.55	7.53
20 yrs	6.48	6.52	7.56	6.41	6.43	7.50	6.51	6.54	7.57
Irred.†	6.50	6.54	7.60						

	Inflation 5% Dec 2	Dec 1	Yr. ago	Inflation 10% Dec 2	Dec 1	Yr. ago
Up to 5 yrs	3.17	3.17	3.09	2.45	2.45	2.43
Over 5 yrs	3.07	3.08	3.44	2.87	2.87	3.24

Average gross redemption yields are shown above. Coupon Bands: Low: 0%-7¾%; Medium: 8%-10¾%; High: 11% and over. † Flat yield. ytd Year to date.

FT Fixed Interest Indices

	Dec 2	Dec 1	Nov 28	Nov 27	Nov 26	Yr ago	High*	Low*
Govt. Secs. (UK)	100.57	100.32	100.36	100.07	100.19	95.46	101.83	93.31
Fixed Interest	132.30	132.06	132.05	131.85	131.88	117.70	133.54	115.32

UK GILTS PRICES

[illegible]

Other Fixed Interest

[illegible]

CURRENCIES AND MONEY

Yen scrambles higher on Tokyo talk

MARKETS REPORT

By Simon Kuper

[…] rose yesterday after […] officials warned […] latest slide.

[…] Sakakibara, the […] vice finance minis[ter for i]nternational affairs, [know]n as Mr Yen in tribute [to his i]nfluence, said: "We [are con]cerned about the [d]ecline in the value of [the yen]. We are prepared to [take] appropriate [action] to main[tain st]ability of the foreign [exchan]ge market."

[On M]onday, the yen had [fallen] below Y129 to its [lowest] level against the dol[lar sin]ce May 1992.

[Anot]her finance ministry [officia]l, Haruhiko Kuroda, [said: "]Excessive depreciation [of the] yen is counterproduc[tive."] Japan remained in [contac]t with US monetary [autho]rities regarding the [curre]ncy market, he added.

[Rob]ert Lynch, currency [strate]gist at Paribas Capital Markets in New York, said: "It's probably the strongest verbal intervention we've had out of Japanese officials in the latest dollar rally."

Late on Monday Robert Rubin, US treasury secretary, had hit the dollar by reiterating that he shared Tokyo's concerns about the weak yen. However, he also said that Washington's dollar policy was unchanged.

Jesper Dannesboe, treasury economist at ABN-Amro in London, said the Japanese comments implied that Y130 was the near-term political cap for the yen against the dollar.

Reimut Jochimsen, Bundesbank council member, said the dollar's recent rise would "not help us with our stability policies". He was apparently referring to price stability. But he also said there had been a slight fall in inflationary pressures. He had no "acute fears" about prices at the moment.

Yesterday's fall in other Asian currencies limited the yen's rebound. The dollar dropped Y0.6 against the yen and just 0.2 pfennigs against the D-Mark to close in London at Y128.7 and DM1.775. The dollar faced trendline resistance at DM1.78. The Swiss franc rose 0.5 centimes against the D-Mark to SFr0.801.

The Russian rouble, under pressure recently, softened slightly to 5,961/63 against the dollar. Russia defended its currency by raising interest rates on Monday.

■ Most Asian currencies fell yesterday as South Korea kept the market waiting for its expected rescue package from the International Monetary Fund. A report that Korea and Indonesia had withdrawn their contributions from the IMF's bailout package for Thailand also hurt Asian sentiment.

The Thai baht and Malaysian ringgit suffered as the Korean won fell 4 per cent to 1,228 against the dollar. Juliet Sampson, emerging markets analyst at Bank of America in London, said: "A few weeks ago you could have said the south east Asian currencies had fallen enough. But when Korea goes, there's more reason for them to fall."

The ringgit was also hit by fresh calls on Monday from Mahathir Mohamad, Malaysia's prime minister, to limit currency traders' access to leverage and to tax them on their profits. He had been quiet for a while.

■ Some currency strategists have changed their mind about the yen since its recent fall. Goldman Sachs, in a comment headed "We give in – a bit", lowered its three-month yen forecast from Y120 to Y128 against the dollar. It cited the contrast between the bad economic news from Japan and the good news from the US.

Brian Marber, the independent technical analyst, notes that the yen's effective exchange rate against a weighted basket of currencies has fallen through its April low. The yen could therefore hit Y135 to the dollar within a fortnight.

■ The Bank of England seems to have been deserting its "activist approach to getting the pound down", Morgan Stanley says.

The government may likewise be resigned to letting the market set sterling's level. Lord Clinton Davis, a junior trade minister, yesterday said he realised that the pound's strength had created trouble for exporters, but added that weakening the pound was not the government's job. "Let's hope that in the medium to longer term the matters affecting the value of the pound will settle down," he said.

Dollar

Against the ringgit (Rg per $)

Source: Datastream/ICV

■ **Pound in New York**

Dec 2	—Latest—	— Prev. close —
£ spot	1.6820	1.6850
1 mth	1.6795	1.6827
3 mth	1.6749	1.6778
1 yr	1.6536	1.6567

■ **OTHER CURRENCIES**

Dec 2	£	$
Czech Rp	59.1220 - 59.2447	35.1540 - 35.2060
Hungary	336.546 - 336.828	200.110 - 200.160
Iran	5048.40 - 5045.40	3000.00 - 3000.00
Kuwait	0.5116 - 0.5127	0.3042 - 0.3047
Poland	5.9738 - 5.9824	3.5520 - 3.5550
Russia	10025.2 - 10034.5	5961.00 - 5963.00
U.A.E.	6.1771 - 6.1808	3.6729 - 3.6730

POUND SPOT FORWARD AGAINST THE POUND

Dec 2		Closing mid-point	Change on day	Bid/offer spread	Day's Mid high	Day's Mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	Bank of Eng. Index
	(Sch)	21.0099	-0.0597	983 - 214	21.1068	20.9733	20.941	3.9	20.8154	3.7	20.2897	3.4	102.4
	(BFr)	61.5891	-0.1696	371 - 410	61.8640	61.5040	61.3862	4.3	60.9905	3.9	59.4342	3.5	101.9
	(DKr)	11.3623	-0.0351	572 - 673	11.4146	11.3453	11.3254	3.9	11.2609	3.8	11.0011	3.2	104.3
	(FM)	9.0255	-0.0301	185 - 324	9.0660	9.0170	8.9924	4.4	8.9373	3.9	8.7209	3.4	80.7
	(FFr)	9.9929	-0.0261	891 - 967	10.0377	9.9726	9.9577	4.2	9.8959	3.9	9.64	3.5	105.4
…y	(DM)	2.9854	-0.0085	838 - 870	3.0004	2.9795	2.9754	4.0	2.9571	3.8	2.8808	3.5	103.0
	(Dr)	468.184	-1.382	894 - 475	470.395	467.548	470.645	-6.2	476.071	-6.7	493.403	-5.4	65.5
	(I£)	1.1427	-0.0035	416 - 438	1.1461	1.1426	1.1416	1.2	1.1399	1.3	1.1167	2.3	97.1
	(L)	2923.92	-7.49	213 - 572	2936.95	2917.97	2920.33	1.5	2912.41	1.6	2855.31	2.3	75.9
…ourg	(LFr)	61.5891	-0.1696	371 - 410	61.8640	61.5040	61.3862	4.3	60.9905	3.9	59.4342	3.5	101.9
…nds	(Fl)	3.3642	-0.0098	626 - 658	3.3807	3.3577	3.3523	4.2	3.3318	3.8	3.248	3.5	101.2
	(NKr)	12.1256	-0.0869	197 - 315	12.2459	12.1135	12.0822	4.3	12.0125	3.7	11.7359	3.2	99.0
	(Es)	304.984	-0.912	808 - 159	306.044	304.305	304.321	2.6	302.996	2.6	296.141	2.9	91.5
	(Pta)	252.362	-0.76	220 - 504	253.470	251.900	251.817	2.6	250.679	2.7	244.915	3.0	76.8
	(SKr)	13.1001	-0.052	920 - 082	13.1752	13.0606	13.0639	3.3	13.0065	2.9	12.7966	2.3	85.1
…land	(SFr)	2.4099	-0.0034	083 - 115	2.4171	2.3997	2.3973	6.2	2.3752	5.8	2.2774	5.5	106.5
	(£)	-	-	-	-	-	-	-	-	-	-	-	105.4
	-	1.5057	-0.0041	047 - 067	1.5116	1.5033	1.5015	3.3	1.4942	3.1	1.4612	3.0	-
	-	1.237746	-	-	-	-	-	-	-	-	-	-	-
…as													
…na	(Peso)	1.6821	-0.0022	815 - 826	1.6865	1.6814	-	-	-	-	-	-	-
	(R$)	1.8658	-0.0024	651 - 664	1.8727	1.8651	-	-	-	-	-	-	-
	(C$)	2.3920	-0.0064	908 - 931	2.4025	2.3905	2.3844	3.8	2.372	3.4	2.3225	2.9	82.8
	(New Peso)	13.7157	-0.0596	094 - 249	13.7806	13.7084	13.8708	-13.5	14.1524	-12.7	15.3389	-11.8	-
	($)	1.6823	-0.0022	818 - 828	1.6888	1.6817	1.68	1.6	1.6751	1.7	1.654	1.7	107.7
…/Middle East/Africa													
…a	(A$)	2.4784	-0.0062	765 - 802	2.4985	2.4761	2.4729	2.7	2.4625	2.6	2.4202	2.3	87.5
…ong	(HK$)	13.0169	-0.0091	121 - 215	13.0612	13.0115	13.0266	-0.9	13.1037	-2.7	13.4351	-3.2	-
	(Rs)	66.0556	-0.0926	107 - 004	67.1870	66.0107	-	-	-	-	-	-	-
	(Shk)	5.9373	-0.0111	272 - 474	5.9474	5.9272	-	-	-	-	-	-	-
	(Y)	216.487	-1.262	364 - 610	218.080	215.850	215.857	7.9	212.492	7.4	201.257	7.0	119.4
…a	(M$)	6.0525	+0.0428	427 - 623	6.1051	5.9884	6.0467	1.2	6.0552	-0.2	6.1577	-1.7	-
…ealand	(NZ$)	2.7704	+0.0083	679 - 728	2.7784	2.7638	2.7694	0.4	2.7691	0.2	2.7687	0.1	105.3
…ines	(Peso)	58.9647	+0.0089	630 - 663	59.5322	58.6014	59.6762	-14.5	61.0325	-14.0	66.5406	-12.8	-
…Arabia	(SR)	6.3102	-0.0074	074 - 129	6.3338	6.3074	6.3037	1.2	6.2892	1.3	6.2192	1.4	-
…ore	(S$)	2.7085	+0.0063	060 - 110	2.7177	2.6923	2.714	-2.4	2.7137	-0.8	2.6961	0.5	-
…Africa	(R)	8.1760	-0.0164	710 - 809	8.2121	8.1710	8.2394	-9.3	8.3379	-7.9	8.7376	-6.9	-
…Korea	(Won)	2065.86	+69.79	525 - 848	2159.36	1989.05	-	-	-	-	-	-	-
…n	(T$)	54.2063	+0.0588	540 - 585	54.8089	54.1540	54.1499	1.2	54.0296	1.3	53.4821	1.3	-
…nd	(Bt)	70.2024	+1.359	133 - 915	70.3915	64.0950	70.6598	-7.8	71.0504	-4.8	73.9655	-4.5	-

[…] for Dec 1. Bid/offer spreads in the Pound Spot table show only the last three decimal places. Sterling index calculated by the Bank of England. Base [averag]e 1990 = 100. Index rebased 1/2/95. Bid, offer, mid spot rates and forward rates in both this and the Dollar table are derived from THE WM/REUTERS [CLOSI]NG SPOT and FORWARD RATE services. Some values are rounded by the F.T. [The ex]change rates printed in this table are also available on the internet at http://www.FT.com

DOLLAR SPOT FORWARD AGAINST THE DOLLAR

Dec 2		Closing mid-point	Change on day	Bid/offer spread	Day's mid high	Day's mid low	One month Rate	One month %PA	Three months Rate	Three months %PA	One year Rate	One year %PA	J.P Morgan Index
Europe													
Austria	(Sch)	12.4888	-0.0195	858 - 919	12.5190	12.4480	12.4651	2.3	12.4262	2.0	12.2687	1.8	102.2
Belgium	(BFr)	36.6100	-0.054	900 - 300	36.6990	36.5030	36.528	2.7	36.4095	2.2	35.9325	1.9	101.9
Denmark	(DKr)	6.7540	-0.0123	530 - 550	6.7709	6.7350	6.7413	2.2	6.7224	1.9	6.651	1.5	103.8
Finland	(FM)	5.3650	-0.011	624 - 675	5.3772	5.3590	5.3528	2.7	5.3354	2.2	5.2725	1.7	80.3
France	(FFr)	5.9400	-0.0079	395 - 405	5.9546	5.9199	5.9273	2.6	5.9076	2.2	5.8281	1.9	104.9
Germany	(DM)	1.7746	-0.0026	742 - 750	1.7793	1.7690	1.7711	2.4	1.7653	2.1	1.7416	1.9	102.7
Greece	(Dr)	278.300	-0.465	210 - 390	279.050	277.520	280.15	-8.0	284.2	-8.5	298.3	-7.2	65.4
Ireland	(I£)	1.4722	+0.0025	712 - 732	1.4740	1.4686	1.4716	0.4	1.4708	0.4	1.4812	-0.6	-
Italy	(L)	1738.05	-2.23	750 - 860	1741.50	1732.22	1738.32	-0.2	1738.62	-0.1	1726.25	0.7	75.7
Luxembourg	(LFr)	36.6100	-0.054	900 - 300	36.6990	36.5030	36.528	2.7	36.4095	2.2	35.9325	1.9	101.9
Netherlands	(Fl)	1.9998	-0.0032	994 - 001	2.0065	1.9935	1.9955	2.6	1.989	2.2	1.9625	1.9	101.2
Norway	(NKr)	7.2078	-0.0423	064 - 091	7.2547	7.1890	7.1919	2.6	7.1711	2.0	7.0953	1.6	98.0
Portugal	(Es)	181.290	-0.31	240 - 340	181.490	180.350	181.147	0.9	180.88	0.9	179.04	1.2	92.1
Spain	(Pta)	150.010	-0.26	970 - 050	150.350	149.540	149.893	0.9	149.648	1.0	148.07	1.3	76.5
Sweden	(SKr)	7.7870	-0.0208	845 - 895	7.8152	7.7520	7.7763	1.7	7.7645	1.2	7.7365	0.6	84.7
Switzerland	(SFr)	1.4325	-0.0002	320 - 330	1.4333	1.4246	1.427	4.6	1.418	4.1	1.3769	3.9	108.6
UK	(£)	1.6823	-0.0022	818 - 828	1.6888	1.6817	1.68	1.6	1.6751	1.7	1.654	1.7	105.4
Ecu	-	1.1173	+0.0016	169 - 177	1.1157	1.1177	1.1188	-1.7	1.1211	-1.4	1.1321	-1.3	-
SDR†	-	0.73653	-	-	-	-	-	-	-	-	-	-	-
Americas													
Argentina	(Peso)	0.9999	-	998 - 999	0.9999	0.9998	-	-	-	-	-	-	-
Brazil	(R$)	1.1091	-	090 - 091	1.1096	1.1080	-	-	-	-	-	-	-
Canada	(C$)	1.4219	-0.002	216 - 221	1.4233	1.4210	1.4194	2.1	1.4161	1.6	1.4042	1.2	82.8
Mexico	(New Peso)	8.1535	-0.025	510 - 560	8.1560	8.1500	8.2585	-15.2	8.4485	-14.5	9.2735	-13.7	-
USA	($)	-	-	-	-	-	-	-	-	-	-	-	108.9
Pacific/Middle East/Africa													
Australia	(A$)	1.4732	-0.0018	725 - 738	1.4795	1.4725	1.4724	0.7	1.4698	0.9	1.4591	1.0	88.4
Hong Kong	(HK$)	7.7375	+0.0045	370 - 380	7.7380	7.7320	7.754	-2.6	7.8225	-4.4	8.1225	-5.0	-
India	(Rs)	39.2650	-0.005	500 - 800	39.8500	39.1500	-	-	-	-	-	-	-
Israel	(Shk)	3.5293	-0.0021	243 - 342	3.5342	3.5243	-	-	-	-	-	-	-
Japan	(Y)	128.685	-0.585	650 - 720	129.310	128.080	128.01	6.3	126.85	5.7	121.675	5.4	120.3
Malaysia	(M$)	3.5976	+0.03	930 - 025	3.6200	3.5550	3.5993	-0.5	3.6148	-1.9	3.7228	-3.5	-
New Zealand	(NZ$)	1.6468	+0.0071	458 - 477	1.6477	1.6452	1.6499	-2.3	1.6553	-2.1	1.6741	-1.7	-
Philippines	(Peso)	35.0500	+0.05	000 - 000	35.4000	34.7000	35.522	-16.2	36.4345	-15.8	40.2285	-14.8	-
Saudi Arabia	(SR)	3.7509	+0.0003	504 - 514	3.7514	3.7504	3.7523	-0.4	3.7544	-0.4	3.7599	-0.2	-
Singapore	(S$)	1.6100	+0.007	090 - 110	1.6120	1.6000	1.6155	-4.1	1.62	-2.5	1.63	-1.2	-
South Africa	(R)	4.8600	-0.0085	585 - 615	4.8650	4.8540	4.9045	-11.0	4.9775	-9.7	5.2825	-8.7	-
South Korea	(Won)	1228.00	+43	800 - 800	1260.00	1195.00	-	-	-	-	-	-	-
Taiwan	(T$)	32.2215	+0.076	000 - 430	32.3800	32.2000	32.2325	-0.4	32.254	-0.4	32.334	-0.3	-
Thailand	(Bt)	41.7300	+0.88	300 - 300	41.8300	38.0000	42.06	-9.5	42.415	-6.8	44.355	-6.3	-

† SDR rate per $ for Dec 1. Bid/offer spreads in the Dollar Spot table show only the last three decimal places. UK, Ireland & ECU are quoted in US currency. J.P. Morgan nominal indices Dec 1: Base average 1990=100.
The exchange rates printed in this table are also available on the internet at http://www.FT.com

WORLD INTEREST RATES

MONEY RATES

December 2	Over night	One month	Three mths	Six mths	One year	Lomb. inter.	Dis. rate	Repo rate
Belgium	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.00	2.75	-
France	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.60	-	3.30
Germany	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4.50	2.50	3.30
Ireland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	-	6.75
Italy	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7.75	6.25	6.02
Netherlands	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	2.75	3.30
Switzerland	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	1.00	-
US	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	5.00	-
Japan	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	0.50	-
■ $ LIBOR FT London								
Interbank Fixing	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
US Dollar CDs	-	5.25	5.45	5.53	5.67	-	-	-
ECU Linked Ds	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-
SDR Linked Ds	-	[illegible]	[illegible]	[illegible]	[illegible]	-	-	-

$ LIBOR interbank fixing rates are offered rates for $10m quoted to the market by four reference banks at 11am each working day. The banks are: Bankers Trust, Bank of Tokyo Mitsubishi, Barclays and National Westminster.
Mid rates are shown for the domestic Money Rates, US$ CDs, ECU & SDR Linked Deposits (Ds).

EURO CURRENCY INTEREST RATES

Dec 2	Short term	7 days notice	One month	Three months	Six months	One year
Belgian Franc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Danish Krone	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
German Mark	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Dutch Guilder	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
French Franc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Portuguese Esc.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Spanish Peseta	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sterling	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Swiss Franc	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Canadian Dollar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
US Dollar	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Italian Lira	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Japanese Yen	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Asian $Sing	[illegible]	6¼ - 6	6¼ - 6	6¼ - 6	6¼ - 6	6¼ - 6

Short term rates are call for the US Dollar and Yen, others: two days' notice

■ **THREE MONTH PIBOR FUTURES** (MATIF) Paris Interbank offered rate

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	96.29	96.29	+0.01	96.29	96.28	6,293	50,701
Mar	96.08	96.08	-	96.10	96.06	6,866	65,548
Jun	95.87	95.86	-	95.89	95.85	3,813	34,009

■ **THREE MONTH EUROMARK FUTURES** (LIFFE)* DM1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	96.22	96.20	-0.01	96.22	96.19	21025	273558
Mar	96.08	96.07	-0.01	96.10	96.06	25380	336383
Jun	95.89	95.86	-0.02	95.90	95.85	19106	294557
Sep	95.71	95.68	-0.01	95.71	95.67	15343	214035

■ **ONE MONTH EUROMARK FUTURES** (LIFFE)* DM3m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	96.21	96.21	-	96.21	96.21	40	7503
Jan		96.33	-0.01			0	600
Feb		96.24	-0.02			0	100
Mar		96.14	-0.03			0	100

■ **THREE MONTH EUROLIRA FUTURES** (LIFFE)* L1000m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	94.02	93.99	-0.01	94.02	93.97	15795	109772
Mar	94.79	94.75	-0.02	94.82	94.72	14947	124464
Jun	95.23	95.25	+0.02	95.27	95.22	9835	125656
Sep	95.40	95.39	+0.02	95.41	95.36	9595	68748

■ **THREE MONTH EURO SWISS FRANC FUTURES** (LIFFE) SFr1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	98.19	98.15	-0.02	98.24	98.15	9179	54935
Mar	98.26	98.16	-0.06	98.30	98.14	10882	48913
Jun	98.10	97.98	-0.06	98.12	97.97	4595	33935
Sep	97.95	97.82	-0.08	97.95	97.83	3286	18318

■ **THREE MONTH EUROYEN FUTURES** (LIFFE) Y100m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	99.15	99.17	-0.11	99.16	99.16	200	na
Mar		99.32	-0.07			0	na
Jun		99.33	-0.05			0	na

■ **THREE MONTH ECU FUTURES** (LIFFE) Ecu1m points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	95.48	95.45	-0.01	95.48	95.44	608	8647
Mar	95.41	95.40	-0.01	95.41	95.39	532	7115
Jun	95.37	95.36	-0.01	95.37	95.35	328	6379
Sep	95.33	95.32	-0.01	95.35	95.32	569	7499

* LIFFE futures also traded on APT

■ **EUROLIRA OPTIONS** (LIFFE) L1000m points of 100%

Strike Price	CALLS Dec	CALLS Mar	CALLS Jun	PUTS Dec	PUTS Mar	PUTS Jun
9375	0.26	1.02	1.51	0.02	0.02	0.01
9400	0.08	0.78	1.27	0.09	0.03	0.02
9425	0.01	0.56	1.04	0.27	0.06	0.04

Est. vol. total, Calls 6569 Puts 2913. Previous day's open int., Calls 234681 Puts 141483

CROSS RATES AND DERIVATIVES

EXCHANGE CROSS RATES

Dec 2		BFr	DKr	FFr	DM	I£	L	Fl	NKr	Es	Pta	SKr	SFr	£	C$	$	Y	Ecu
…um	(BFr)	100	18.45	16.23	4.847	1.855	4747	5.462	19.69	495.2	409.8	21.27	3.913	1.624	3.884	2.732	351.5	2.445
…nark	(DKr)	54.20	10	8.795	2.627	1.008	2573	2.961	10.67	268.4	222.1	11.53	2.121	0.880	2.105	1.481	190.5	1.325
…e	(FFr)	61.63	11.37	10	2.988	1.144	2926	3.367	12.13	305.2	252.5	13.11	2.412	1.001	2.394	1.684	216.6	1.507
…any	(DM)	20.63	3.806	3.347	1	0.383	979.4	1.127	4.062	102.2	84.53	4.388	0.807	0.335	0.801	0.564	72.51	0.504
…d	(I£)	53.90	9.943	8.745	2.613	1	2559	2.944	10.61	266.9	220.8	11.46	2.109	0.875	2.093	1.472	189.5	1.318
	(L)	2.106	0.389	0.342	0.102	0.039	100	0.115	0.415	10.43	8.631	0.448	0.082	0.034	0.082	0.058	7.404	0.052
…erlands	(Fl)	18.31	3.377	2.970	0.887	0.340	869.1	1	3.604	90.65	75.01	3.894	0.716	0.297	0.711	0.500	64.35	0.448
…ay	(NKr)	50.79	9.370	8.241	2.462	0.942	2411	2.775	10	251.5	208.1	10.80	1.987	0.825	1.973	1.387	178.5	1.242
…gal	(Es)	20.19	3.726	3.277	0.979	0.375	958.7	1.103	3.976	100	82.75	4.295	0.790	0.328	0.784	0.552	70.98	0.494
	(Pta)	24.41	4.502	3.960	1.183	0.453	1159	1.333	4.805	120.9	100	5.191	0.955	0.396	0.948	0.667	85.78	0.597
…len	(SKr)	47.01	8.673	7.628	2.279	0.872	2232	2.568	9.256	232.8	192.6	10	1.840	0.763	1.826	1.284	165.3	1.149
…erland	(SFr)	25.56	4.715	4.147	1.239	0.474	1213	1.396	5.032	126.6	104.7	5.436	1	0.415	0.993	0.698	89.83	0.625
	(£)	61.59	11.36	9.993	2.985	1.143	2924	3.364	12.13	305.0	252.4	13.10	2.410	1	2.392	1.682	216.5	1.506
…da	(C$)	25.75	4.750	4.178	1.248	0.478	1222	1.406	5.069	127.5	105.5	5.476	1.007	0.418	1	0.703	90.50	0.629
	($)	36.61	6.754	5.940	1.775	0.679	1738	2.000	7.208	181.3	150.0	7.787	1.433	0.594	1.422	1	128.7	0.895
…n	(Y)	28.45	5.248	4.616	1.379	0.528	1351	1.554	5.601	140.9	116.6	6.051	1.113	0.462	1.105	0.777	100	0.696
	-	40.90	7.546	6.637	1.983	0.759	1942	2.234	8.053	202.6	167.6	8.700	1.601	0.664	1.589	1.117	143.8	1

[Danish] Kroner, French Franc, Norwegian Kroner, and Swedish Kronor per 10; Belgian Franc, Yen, Escudo, Lira and Peseta per 100.

■ **D-MARK FUTURES** (IMM) DM 125,000 per DM

	Open	Latest	Change	High	Low	Est. vol	Open int.
	0.5630	0.5646	+0.0018	0.5659	0.5623	30,695	88,307
	0.5657	0.5678	+0.0021	0.5681	0.5657	3,119	8,848
	0.5705	0.5705	-	0.5705	0.5705	184	4,110

■ **SWISS FRANC FUTURES** (IMM) SFr 125,000 per SFr

	Open	Latest	Change	High	Low	Est. vol	Open int.
	0.6991	0.7014	+0.0023	0.7033	0.6988	13,956	43,206
	0.7065	0.7085	+0.0023	0.7100	0.7050	1,050	5,043
	-	0.7150	+0.0016	0.7155	-	2	1,289

■ **JAPANESE YEN FUTURES** (IMM) Yen 12.5m per Yen 100

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	0.7776	0.7797	+0.0029	0.7820	0.7750	24,251	131,447
Mar	0.7904	0.7914	+0.0032	0.7925	0.7857	3,490	7,858
Jun	0.8010	0.8020	+0.0026	0.8020	0.8000	9	1,543

■ **STERLING FUTURES** (IMM) £62,500 per £

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	1.6836	1.6822	-0.0020	1.6878	1.6814	12,956	53,568
Mar	1.6776	1.6750	-0.0018	1.6776	1.6740	678	3,505
Jun	-	1.6690	-	-	1.6630	1,202	1,248

UK INTEREST RATES

LONDON MONEY RATES

Dec 2	Over-night	7 days notice	One month	Three months	Six months	One year
Interbank Sterling	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Sterling CDs	-	-	[illegible]	[illegible]	[illegible]	[illegible]
Treasury Bills	-	-	[illegible]	[illegible]	-	-
Bank Bills	-	-	[illegible]	[illegible]	[illegible]	-
Local authority deps.	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Discount Market deps	[illegible]	[illegible]	-	-	-	-

UK clearing bank base lending rate 7¼ per cent from Nov 6, 1997

	Up to 1 month	1-3 month	3-6 months	6-9 months	9-12 months
Certs of Tax dep. (£100,000)	2½	5½	5	5	4¾

Certs of Tax dep. under £100,000 is 2½pc. Deposits withdrawn for cash 1½pc. Ave. tender rate of discount on Nov 28, 7.1330pc. ECGD fixed rate Stlg. Export Finance. Make up day Nov 28, 1997. Agreed rate for period Dec 24, 1997 to Jan 26, 1998, Scheme III 8.84pc. Reference rate for period Nov 1, 1997 to Nov 28, 1997, Schemes IV & V 7.601pc. Finance House Base Rate 7½pc from Dec 1, 1997

■ **THREE MONTH STERLING FUTURES** (LIFFE) £500,000 points of 100%

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	92.30	92.28	-0.02	92.30	92.27	9269	156355
Mar	92.26	92.23	-0.02	92.26	92.22	8147	123048
Jun	92.30	92.27	-0.03	92.30	92.26	6986	106899
Sep	92.40	92.37	-0.03	92.40	92.36	6388	84008
Dec	92.56	92.54	-0.03	92.58	92.53	2894	74995

[Als]o traded on APT. All Open Interest figs. are for previous day.

■ **SHORT STERLING OPTIONS** (LIFFE) £500,000 points of 100%

Strike Price	CALLS Dec	CALLS Mar	CALLS Jun	PUTS Dec	PUTS Mar	PUTS Jun
9225	0.07	0.14	0.24	0.04	0.16	0.22
9250	0.01	0.04	0.13	0.23	0.31	0.36
9275	0	0.01	0.08	0.47	0.53	0.54

Est. vol. total, Calls 3460 Puts 3409. Previous day's open int., Calls 239158 Puts 235534

EMS EUROPEAN CURRENCY UNIT RATES

Dec 2	Ecu cen. rates	Rate against Ecu	Change on day	% +/- from cen. rate	% spread v weakest	Div. ind.
Ireland	0.798709	0.758072	+0.001135	-5.09	8.32	34
Italy	1906.48	1938.44	+0.04	1.68	1.12	-12
Spain	163.826	167.297	-0.024	2.12	0.68	-15
Finland	5.85424	5.98550	+0.00083	2.24	0.56	-15
Portugal	197.398	202.146	-0.089	2.41	0.40	-16
France	6.45863	6.62405	+0.00018	2.56	0.25	-22
Denmark	7.34555	7.53411	+0.00028	2.57	0.24	-18
Germany	1.92573	1.97934	-0.00001	2.78	0.03	-27
Netherlands	2.16979	2.23051	-0.00006	2.80	0.01	-21
Belgium	39.7191	40.8326	+0.0051	2.80	0.01	-20
Austria	13.5485	13.9297	-0.0005	2.81	0.00	-21
NON ERM MEMBERS						
Greece	295.269	310.415	-0.007	5.13	-2.20	-
UK	0.793103	0.663021	-0.00011	-16.40	22.99	-

Ecu central rates set by the European Commission. Currencies are in descending relative strength. Percentage changes are for Ecu: a positive change denotes a weak currency. Divergence shows the ratio between two spreads: the percentage difference between the actual market and Ecu central rates for a currency, and the maximum permitted percentage deviation of the currency's market rate from its Ecu central rate. 17/9/92: Sterling suspended from ERM. Adjustment calculated by the Financial Times.

■ **PHILADELPHIA SE £/$ OPTIONS** £31,250 (cents per pound)

Strike Price	CALLS Dec	CALLS Jan	CALLS Feb	PUTS Dec	PUTS Jan	PUTS Feb
1.670	1.91	2.72	3.26	0.42	1.48	2.28
1.680	1.28	2.22	2.73	0.76	1.95	2.70
1.690	0.76	1.75	2.32	1.26	2.51	3.26

Previous day's vol., Calls 20 Puts 106 . Prev. day's open int., Calls 32,170 Puts 28,735

■ **PHILADELPHIA SE D-MARK/$ OPTIONS** DM62,500 ($ per DM)

Strike Price	CALLS Dec	CALLS Jan	CALLS Feb	PUTS Dec	PUTS Jan	PUTS Feb
0.560	0.51	0.97	1.25	0.27	0.62	0.82
0.565	0.27	0.71	0.99	0.52	0.86	1.06
0.570	0.13	0.51	0.77	0.85	1.16	1.35

Previous day's vol., Calls 535 Puts 905 . Prev. day's open int., Calls 10,395 Puts 39,249

■ **THREE MONTH EURODOLLAR** (IMM) $1m points of 100%

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	94.10	94.08	-	94.11	94.09	50,066	417,676
Mar	94.14	94.13	-0.02	94.14	94.12	63,183	449,114
Jun	94.08	94.08	-0.11	94.10	94.07	58,554	365,999

■ **US TREASURY BILL FUTURES** (IMM) $1m per 100%

	Open	Latest	Change	High	Low	Est. vol	Open int.
Dec	94.92	94.92	-	94.95	94.92	964	5,909
Mar	95.02	95.00	-	95.03	95.01	604	6,125
Jun	-	94.97	-	94.99	94.97	17	821

All Open Interest figs. are for previous day

■ **EUROMARK OPTIONS** (LIFFE) DM1m points of 100%

Strike Price	CALLS Dec	CALLS Jan	CALLS Feb	CALLS Mar	PUTS Dec	PUTS Jan	PUTS Feb	PUTS Mar
9600	0.21	0.13	0.15	0.16	0.01	0.06	0.08	0.09
9625	0.01	0.02	0.04	0.05	0.06	0.20	0.22	0.23
9650	0	0	0.01	0.02	0.30	0.43	0.44	0.45
9675	0	0	0	0	0.55	0.68	0.68	0.68

Est. vol. total, Calls 4060 Puts 6613. Previous day's open int., Calls 406560 Puts 380782

■ **EURO SWISS FRANC OPTIONS** (LIFFE) SFr 1m points of 100%

Strike Price	CALLS Dec	CALLS Mar	CALLS Jun	PUTS Dec	PUTS Mar	PUTS Jun
9825	0.02	0.12	0.12	0.12	0.21	0.38
9850	0.01	0.04	0.05	0.36	0.38	0.56

Est. vol. total, Calls 0 Puts 0. Previous day's open int., Calls 3350 Puts 3010

BASE LENDING RATES

	%		%		%
Adam & Company	7.25	Exeter Trust Limited	8.25	●Singer & Friedlander	7.25
Allied Irish Bank (GB)	7.25	Financial & Gen Bank	8.00	●Smith & Williamson	7.25
●Henry Ansbacher	7.25	●Robert Fleming & Co	7.25	Sun Banking Corp Ltd	7.25
Banco Bilbao Vizcaya	7.25	●Guinness Mahon	7.25	TSB	7.25
Bank of Cyprus	7.25	Habib Bank AG Zurich	7.25	United Bank of Kuwait	7.25
Bank of Ireland	7.25	●Hambros Bank	7.25	Unity Trust Bank Plc	7.25
Bank of India	7.25	Heritable & Gen Inv Bk	7.25	Whiteaway Laidlaw	7.25
Bank of Scotland	7.25	C. Hoare & Co	7.25	Yorkshire Bank	7.25
Barclays Bank	7.25	Hongkong & Shanghai	7.25		
Brit Bk of Mid East	7.25	Investec Bank (UK) Ltd	7.25	● Members of London Investment Banking Association	
●Brown Shipley & Co Ltd	7.25	Julian Hodge Bank	7.25	* In administration	
Citibank NA	7.25	●Leopold Joseph & Sons	7.25		
Clydesdale Bank	7.25	Lloyds Bank	7.25		
The Co-operative Bank	7.25	Midland Bank	7.25		
Coutts & Co	7.25	NatWestminster	7.25		
Cyprus Popular Bank	7.25	●Rea Brothers	7.00		
Duncan Lawrie	7.25	Royal Bk of Scotland	7.25		
		Scottish Widows Bank	7.25		

COMMODITIES AND AGRICULTURE

Nickel at 3½-year low on fears over Asia

MARKETS REPORT

By Kenneth Gooding and Gary Mead

Nickel prices dropped to their lowest level for 3½ years in after-hours trading in London, dealers said. The metal, used mainly in stainless steel, a favourite material in Asia, fell by more than 2½ per cent from Monday's level to $5,930 a tonne.

Worries over Asian demand continued to dog nickel. "I think there is more room on the downside because there is a lack of consumer confidence even though metal demand in the US and Europe is steady," said one trader.

Other metals were also under bearish pressure on the London Metal Exchange. Lead and zinc were near 32¼ and 10½-month lows respectively.

Copper in early trading fell to $1,815 a tonne, the lowest since July 1996, but rallied to close at $1,823. Its fundamental outlook has weakened because of Asia's economic problems, according to Bloomsbury Minerals Economics, the copper consultancy. It suggested there would be a surplus of refined copper until 2000. By 1999, total "liquid" copper stocks would be 1.113m tonnes. BME has cut its price forecasts, putting the average for 1998 at $1,873 a tonne and that for 1999 at $1,818, well below the estimated $2,281 for this year.

Gold rallied from an early weakening to $292.50 an ounce to close in London at $294.70, down 10 cents on the day, after some physical buying and some covering by those who had sold short.

Crude oil prices lifted moderately yesterday as the market rebalanced itself after the announced 10 per cent increase in the production quota of the Organisation of Petroleum Exporting Countries. The world benchmark, Brent crude for January delivery, was 3 cents up at $18.19 a barrel, and on the New York Mercantile Exchange, January crude followed suit, up 9 cents at $18.75 a barrel in later trading.

The IPE announced yesterday that it would extend its Brent crude futures contract to three years forward from December 17; currently it lists 12 successive monthly contracts.

Coffee futures were buoyant on the London International Financial Futures Exchange, with the January contract marching to a high of $1,790 in the afternoon, although it eased back to close at $1,788, up $50 a tonne. Traders said that investment funds had again made most of the play; they pointed out that although coffee futures have rallied strongly in the past week, they are still far beneath this year's peak of $2,700 on May 30. The bullish mood was boosted by concern over late harvesting in central America and a continuing port strike in Brazil.

Syndicate in push to lift price of silver

By Kenneth Gooding, Mining Correspondent

A syndicate including a US investment fund and two bullion houses is buying silver in the hope of pushing up prices to $8 or $9 an ounce, according to Ted Arnold, metals specialist at the Merrill Lynch financial services group.

The syndicate already controls a large quantity of silver which, "most importantly", is of good delivery quality in London and New York. This has driven New York Commodity Market stocks to a 12-year low.

Silver is mainly used in photographic materials and in jewellery and silverware – the favourite form of investment in India – and a variety of electronic and electrical applications. The price in London closed last night at $5.34 an ounce, up 8 cents.

"The syndicate takes the view that he who controls the stocks is the master of the market as he can dictate the borrowing rates for metal and the short-term price. If more money is brought into the syndicate, it can afford to buy an increasing proportion of rising production as well," said Mr Arnold in Merrill's Commodity Market Trends.

The syndicate has taken perhaps three years and spent a great deal of cash to put the operation into place. It "intends to take a good profit out of the market before prices come back again from the massive physical supply response that is to be expected".

Dubai merchants say not much silver would come out of India below $7 an ounce. At $8 or $9 the flow would be swift. "But it is not good enough to have the physical silver. It has to be turned into good delivery silver and this is time consuming."

Record fines for oil traders

By Gary Mead

The International Petroleum Exchange has imposed its biggest fines to date on Paribas Futures and Cargill Investor Services, which were found to have broken IPE trading rules.

Paribas Futures has been fined a total of £91,000 and CIS £80,000 for infringing IPE regulations in November 1996.

The internal disciplinary panel of the IPE conducted a hearing in May this year, in which it found that Paribas Futures failed to carry out contractual commitments involving the majority of 8,651 gas oil futures lots (a record volume going to delivery at the time), equivalent to 865,100 tonnes of gas oil, worth about $200m.

The previous record fine was £50,000, imposed in 1992, although the IPE was not then required to disclose the identity of the member.

Paribas Futures was fined on the basis of three infringements concerning the contract. The two most serious infringements were concerned with a partial failure to ensure delivery of the gas oil to CIS without interruption, and that as a consequence it was liable to bring the exchange into disrepute.

CIS was also fined on three counts, including bringing the exchange into disrepute and failing to take proper delivery of an amount of the gas oil in question.

It is believed that the problems the two parties found in fulfilling the physical delivery obligations of the contract may have resulted from its unusually large size. At the time traders said Cargill went heavily long in the contract, betting that Paribas – which was acting on behalf of the trader AIC, which had a short position – would not be able to deliver its commitments.

John Mackeonis, the IPE head of compliance, finance and internal audit, said the fines demonstrated that the exchange would take all steps necessary to protect the integrity of its contracts and regulations.

"The exchange has a rule book," he said. "We want people to come back and use us again, and for that they need to have perfect trust in us. We also have a legal requirement to enforce these regulations. We hope that these fines will prove a deterrent."

The IPE said that the time between the breaches and publication of the results of the internal investigation was due to the complexity of the events in question and subsequent appeal hearings.

IPE in outcry over options for reform

Revolution is afoot at London's International Petroleum Exchange. There are a number of options for reform of the market – but if the IPE remains an independent exchange then it is likely that in 1998 it will vote to add a system of electronic trading to its current practice of open outcry.

The IPE typically trades about 60,000 lots of Brent crude and gas oil a day – or about 75 per cent of total world oil production, with a market value well in excess of $1bn. It has grown quickly since it was launched in April 1981.

"But you can't just sit on your laurels," says Richard Reinert, the chairman of the IPE. "There's enormous pressure to bring systems, companies, and markets together. What you're seeing in financial markets in terms of consolidation you're now beginning to see in exchanges."

The possible changes revolve around three key issues. Should the IPE remain independent, or merge with another exchange. If it stays independent should it demutualise? And should it bow to the increasing pressures – of cost, flexibility and efficiency – to switch, either fully or in part, to screen-based trading?

In September the IPE board established a committee to study these questions. At the end of January 1998 that committee will put its findings to the board. A final decision, to be put to an EGM of the IPE, is now likely to be reached in March 1998.

Richard Reinert: sees pressures for consolidation Fergus Wilkie

Mr Reinert is managing director of Refco London, the borkers, and has been chairman of the IPE since January 1996. He says everyone involved in the reform is aware of the need to come up with a decision in a timely manner. "Obviously there are apprehensions both within the IPE and member firms as far as employees are concerned," he adds.

For the sub-committee studying the issues of open outcry versus electronic trading and the question of demutualisation, cost is clearly an important factor. "Without doubt, on the basis of cost, the most viable option is to go 100 per cent electronic," says Mr Reinert. "I would expect savings in the order of 50 per cent for member firms and the exchange itself. The savings would be quite immense."

But the big problem with a switch to electronic trading is the almost certain loss of liquidity that would result. Local traders – individuals who trade on their own account – contribute between 20 per cent and 30 per cent of the exchange's volume and would take time to adjust to electronic trading. "From day one we wouldn't have that volume from them," says Mr Reinert. There are 43 member firms and 33 locals on the floor of the exchange.

If the IPE remains independent yet goes for electronic screen trading then there is likely to be pressure to demutualise. "The fear of membership if we go totally electronic is that it will become much easier for users of the market to become members of the exchange, to obtain a screen and to participate. The members will want something in return and that could well be direct participation in the profitability of the exchange, by becoming a shareholder and receiving dividends," says Mr Reinert.

The betting must be that the IPE ultimately opts for a hybrid system, where everyone in the market is given the chance, over an indefinite period of time, to adjust to an electronic trading system. "The advantage of that is you have the best of both worlds and then you allow the market to decide which platform it prefers," says Mr Reinert.

Another sub-committee is considering possible mergers. The IPE spurned advances from the London International Financial Futures Exchange as recently as a year ago. Now it is considering an offer to merge with the New York Mercantile Exchange and has approached Liffe to consider possible links.

Mr Reinert says "it's far too early to say" what the outcome will be. However, the IPE is obviously very comfortable with Nymex, which operates both open outcry and a system of electronic trading called Access. "We're coming close to an agreement to develop a new system using the best of Access and the best of ETS, the electronic trading system of the IPE which is used for the natural gas contract, launched in January this year," says Mr Reinert.

"We want to arrive at a decision which is practical and acceptable to at least 75 per cent of the membership if not more. This is why the committee needs to take longer than anticipated."

It will also allow users of the exchange time to get used to the idea that sooner or later they will have to adapt to screens as well as shouts.

Gary Mead

COMMODITIES PRICES

BASE METALS

LONDON METAL EXCHANGE

(Prices from Amalgamated Metal Trading)

■ ALUMINIUM, 99.7 PURITY ($ per tonne)

	Cash	3 mths
Close	1567-68	1589-90
Previous	1568-69	1591-92
High/low		1592/1582
AM Official	1564-64.5	1587-87.5
Kerb close		1591-92
Open int.	255,006	
Total daily turnover	76,337	

■ ALUMINIUM ALLOY ($ per tonne)

	Cash	3 mths
Close	1440-45	1455-60
Previous	1445-55	1460-65
High/low		1460/1445
AM Official	1437-42	1453-55
Kerb close		1455-60
Open int.	6,111	
Total daily turnover	985	

■ LEAD ($ per tonne)

	Cash	3 mths
Close	514.5-15.5	531.5-32.0
Previous	523-4	540-1
High/low		537/528
AM Official	519-20	536-36.5
Kerb close		534-35
Open int.	31,898	
Total daily turnover	8,678	

■ NICKEL ($ per tonne)

	Cash	3 mths
Close	5975-80	6065-70
Previous	6075-85	6170-75
High/low		6190/6030
AM Official	6065-70	6165-70
Kerb close		6025-30
Open int.	58,589	
Total daily turnover	20,562	

■ TIN ($ per tonne)

	Cash	3 mths
Close	5765-70	5665-70
Previous	5780-90	5670-80
High/low		5675/5640
AM Official	5770-80	5660-65
Kerb close		5670-80
Open int	15,202	
Total daily turnover	2,580	

■ ZINC, special high grade ($ per tonne)

	Cash	3 mths
Close	1109-10	1134-35
Previous	1105.5-06.5	1131-32
High/low		1144/1125
AM Official	1111-12	1134-35
Kerb close		1135-36
Open int.	85,311	
Total daily turnover	28,576	

■ COPPER, grade A ($ per tonne)

	Cash	3 mths
Close	1793-94	1822-23
Previous	1814-15	1842-43
High/low		1842/1813
AM Official	1807-08	1837-38
Kerb close		1823-24
Open int.	159,425	
Total daily turnover	55,209	

■ LME AM Official £/$ rate: 1.6855
LME Closing £/$ rate: 1.6835

Spot: 1.6825 3 mths: 1.6755 6 mths: 1.6669 9 mths: 1.6599

■ HIGH GRADE COPPER (COMEX)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	81.50	+0.05	82.40	81.25	2,634	5,048
Jan	82.40	+0.25	83.30	81.70	515	2,458
Feb	83.00	+0.10	83.60	82.40	220	1,789
Mar	83.40	+0.05	84.10	82.80	6,455	31,673
Apr	83.90	-0.05	83.50	83.50	62	1,478
May	84.10	+0.05	84.90	83.60	493	4,791
Total					11,802	65,080

PRECIOUS METALS

■ LONDON BULLION MARKET

(Prices supplied by N M Rothschild)

Gold(Troy oz)	$ price	£ equiv	SFr equiv
Close	294.40-294.90		
Opening	293.00-293.30		
Morning fix	293.50	174.298	419.646
Afternoon fix	295.10	175.227	421.521
Day's High	295.40-295.70		
Day's Low	292.50-292.80		
Previous close	293.50-294.00		

Loco Ldn Mean Gold Lending Rates (Vs US$)

1 month	3.79	6 months	3.95
2 months	3.79	12 months	3.97
3 months	3.82		

Silver Fix	p/troy oz.	US cts equiv.
Spot	315.50	531.50
3 months	318.75	534.70
6 months	321.50	538.85
1 year	327.40	542.25

Gold Coins	$ price	£ equiv.
Krugerrand	297.50-299.50	177-178
Maple Leaf	-	-
New Sovereign	70-73	42-43

Precious Metals continued

■ GOLD COMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	low	Vol	Open Int
Dec	294.4	+0.01	296.3	293.8	2,185	4,086
Jan	295.0	+0.02	-	-	-	6
Feb	295.9	+0.02	297.7	294.8	25,079	105k
Apr	297.7	+0.02	299.5	297.0	767	11,808
Jun	299.7	+0.02	301.4	299.2	711	12,586
Aug	301.8	-	302.8	302.8	59	4,895
Total					29,191	193,849

■ PLATINUM NYMEX (50 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open Int
Jan	388.5	+4.0	389.0	386.0	1,046	10,305
Apr	385.0	+4.0	385.0	382.0	107	2,331
Jul	382.0	-	378.0	378.0	10	104
Total					1,153	12,740

■ PALLADIUM NYMEX (100 Troy oz.; $/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open Int
Dec	211.50	+2.00	214.00	211.50	185	662
Mar	208.50	+2.50	210.00	207.25	528	3,526
Jun	205.00	+2.50	204.50	204.50	1	118
Sep	202.00	-	-	-	2	4
Total					713	4,310

■ SILVER COMEX (5,000 Troy oz.; Cents/troy oz.)

	Sett price	Day's change	High	Low	Vol	Open Int
Dec	527.7	+0.04	531.0	525.5	1,092	1,892
Jan	530.2	+0.03	-	518.0	1	37
Mar	534.8	+0.03	538.0	532.0	13,316	65,718
May	538.0	+0.03	541.0	536.5	336	5,806
Jul	540.2	+0.02	542.0	539.5	25	5,199
Sep	542.1	+0.01	-	-	15	780
Total					14,797	89,570

ENERGY

■ CRUDE OIL NYMEX (1,000 barrels, $/barrel)

	Latest price	Day's change	High	Low	Vol	Open Int
Jan	18.77	+0.11	18.88	18.66	54,933	108k
Feb	19.05	+0.11	19.11	18.95	27,308	59,255
Mar	19.20	+0.08	19.25	19.09	10,031	33,196
Apr	19.30	+0.05	19.35	19.23	6,813	19,837
May	19.41	+0.06	19.45	19.38	3,688	19,312
Jun	19.48	+0.08	19.50	19.42	5,174	31,515
Total					128,238	414,389

■ CRUDE OIL IPE ($/barrel)

	Latest price	Day's change	High	Low	Vol	Open Int
Jan	18.20	+0.04	18.30	18.08	16,870	59,038
Feb	18.25	+0.09	18.31	18.12	11,713	63,927
Mar	18.25	+0.09	18.30	18.15	4,472	16,979
Apr	18.24	+0.08	18.29	18.14	4,475	10,758
May	18.25	+0.09	18.25	18.16	1,164	8,100
Jun	18.15	-0.01	18.25	18.15	910	14,020
Total					n/a	n/a

■ HEATING OIL NYMEX (42,000 US galls., c/US galls.)

	Latest price	Day's change	High	Low	Vol	Open Int
Jan	53.30	+0.59	53.45	52.75	21,093	25,294
Feb	53.85	+0.40	54.05	53.35	11,818	25,294
Mar	54.10	+0.55	54.10	53.80	4,095	14,324
Apr	53.50	+0.60	53.65	53.25	1,774	7,648
May	52.85	+0.60	53.00	52.65	846	6,214
Jun	52.65	+0.60	52.90	52.50	1,145	5,383
Total					43,811	131,944

■ GAS OIL IPE ($/tonne)

	Sett price	Day's change	High	Low	Vol	Open Int
Dec	165.75	+1.75	166.25	164.50	7,633	17,113
Jan	166.25	+1.25	166.75	164.75	8,882	23,420
Feb	166.00	+0.50	167.00	165.50	2,257	16,195
Mar	165.75	-0.50	166.00	165.25	1,497	10,779
Apr	165.00	+0.50	165.50	164.50	1,175	4,444
May	164.25	+0.25	164.75	164.00	266	2,808
Total					23,820	98,485

■ NATURAL GAS IPE (1,000 therms; pence per therm)

Jan	17.950	-0.300	17.950	17.950	20	2,825
Feb	18.200	-0.400	18.300	18.200	75	3,040
Total					395	12,215

■ NATURAL GAS NYMEX (10,000 mmBtu.; $/mmBtu.)

	Latest price	Day's change	High	Low	Vol	Open Int
Jan	2.710	-0.058	2.812	2.690	29,371	51,170
Feb	2.610	-0.034	2.680	2.590	10,507	26,015
Mar	2.430	-0.019	2.480	2.425	3,541	20,379
Apr	2.275	+0.001	2.300	2.265	1,086	11,680
May	2.240	+0.006	2.255	2.230	786	8,368
Jun	2.240	+0.011	2.250	2.225	728	8,354
Total					48,728	211,814

■ UNLEADED GASOLINE
NYMEX (42,000 US galls., c/US galls.)

	Latest price	Day's change	High	Low	Vol	Open Int
Jan	56.50	+0.25	56.75	56.10	11,520	34,437
Feb	56.80	+0.26	57.00	56.55	3,283	15,305
Mar	57.25	+0.21	57.50	57.20	1,573	9,867
Apr	59.90	+0.23	60.00	59.90	1,328	8,108
May	59.00	-	59.70	59.60	1,483	7,618
Jun	59.30	+0.28	59.60	59.20	937	5,293
Total					20,821	80,185

GRAINS AND OIL SEEDS

■ WHEAT LIFFE (100 tonnes; £ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	81.00	+0.55	81.25	80.75	87	1,554
Mar	83.00	+0.40	83.25	83.00	122	2,915
May	85.00	+0.35	85.40	85.00	115	2,923
Jul	87.00	+0.35	87.35	87.00	55	358
Sep	82.75	+0.25	82.50	82.50	20	20
Total					434	8,182

■ WHEAT CBT (5,000bu min; cents/60lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	341.25	-3.00	347.00	340.50	6,071	4,918
Mar	356.75	-3.50	362.00	356.25	21,512	52,224
May	365.00	-3.25	369.50	364.25	2,605	10,654
Jul	369.00	-3.75	373.00	368.00	1,512	16,965
Sep	372.00	-5.00	377.00	377.00	43	388
Dec	382.50	-4.00	386.00	384.00	114	3,435
Total					31,818	88,827

■ MAIZE CBT (5,000 bu min; cents/56lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	271.50	-1.25	273.75	271.25	18,270	40,387
Mar	280.75	-1.75	283.00	280.50	40,592	180,024
May	287.25	-1.75	289.50	287.00	3,141	41,771
Jul	291.00	-2.00	293.25	290.75	3,641	52,714
Sep	287.00	-1.00	287.50	286.50	55	5,141
Dec	287.00	-1.00	287.75	286.25	2,388	31,229
Total					6,320	352,930

■ BARLEY LIFFE (100 tonnes; £ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	74.65	-0.80	75.00	74.50	34	486
Mar	77.25	-0.75	77.25	77.10	24	1,340
May	78.50	-1.00	-	-	-	20
Sep	80.50	+0.25	-	-	-	6
Total					58	1,912

■ SOYABEANS CBT (5,000bu min; cents/60lb bushel)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	704.00	-15.50	721.00	701.00	26,672	69,048
Mar	706.75	-13.75	724.00	707.00	4,562	27,729
May	713.25	-12.50	727.00	712.00	2,244	20,763
Jul	718.00	-12.25	730.50	715.00	1,221	22,186
Aug	711.00	-9.25	723.00	710.00	38	1,723
Sep	690.50	-8.50	695.00	695.00	2	56
Total					35,088	149,980

■ SOYABEAN OIL CBT (60,000lbs; cents/lb)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	25.17	-0.28	25.50	25.15	6,910	5,452
Jan	25.43	-0.27	25.75	25.40	10,108	48,955
Mar	25.73	-0.23	26.04	25.69	3,549	33,803
May	25.88	-0.17	26.00	25.82	414	13,134
Jul	25.92	-0.17	26.10	25.85	729	11,659
Aug	25.83	-0.14	25.90	25.85	330	2,032
Total					22,149	117,007

■ SOYABEAN MEAL CBT (100 tons; $/ton)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	230.6	-5.9	236.7	230.3	7,601	14,512
Jan	222.5	-5.4	228.0	222.2	7,898	31,570
Mar	217.3	-4.8	222.2	217.0	6,642	35,355
May	214.5	-3.3	218.2	214.5	1,978	20,732
Jul	214.3	-3.4	217.5	214.0	1,500	14,486
Aug	213.5	-3.5	217.5	215.0	71	3,279
Total					25,888	126,536

■ POTATOES LIFFE (20 tonnes; £ per tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	95.0	-	-	-	-	-
Apr	112.0	-7.0	116.0	112.0	58	1,060
May	122.0	-7.1	-	-	-	22
Jun	132.0	-7.1	-	-	-	-
Nov	60.6	-	-	-	-	-
Total					63	1,105

■ FREIGHT (BIFFEX) LIFFE ($10/index point)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	1215	-10	1220	1215	41	294
Jan	1230	-10	1230	1220	79	698
Feb	1250	-5	1230	1230	30	-
Apr	1325	-15	1330	1325	13	411
Jul	1200	+10	-	-	-	124
Total					163	1,682

	Close	Prev
BFI	1180	1178

PULP AND PAPER

■ PULPEX OMLX (US$; 24 air dry tons)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	509.25	+3.25	509.25	507.75	22	178
Mar	535.25	+6.255	538.00	532.00	77	344
Total					99	654

FUTURES DATA
All futures data supplied by CMS.

Minor metals from Metal Bulletin
European free market, $ per lb in warehouse, unless otherwise stated (changes in brackets). **Antimony:** 99.65%, $ per tonne, 1,590-1,680 (1,650-1,730). **Bismuth:** min 99.99%, tonne lots 3.20-3.35. **Cadmium:** min 99.95%, cents a pound, 30.00-40.00. **Cobalt:** MB free market, min 99.8%, 25.25-26.25 (25.00-26.00); min 99.3%, 19.10-19.60 (19.20-19.70). **Mercury:** min 99.99%, $ per 76 lb flask, 140-150. **Molybdenum:** drummed molybdic oxide, 3.80-3.95 (3.55-3.60). **Selenium:** min 99.5%, 2.00-3.00. **Tungsten ore:** standard min 65%, $ per tonne unit, CIF, 40-52. **Vanadium:** min 98%, CIF, 4.35-4.50 (4.28-4.35).

SOFTS

■ COCOA LIFFE (10 tonnes; £/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	990	+4	990	980	206	3,720
Mar	1020	+5	1020	1010	2,076	70,200
May	1039	+5	1038	1029	232	24,798
Jul	1057	+5	1056	1048	192	11,308
Sep	1074	+4	1074	1066	224	19,088
Dec	1091	+4	1091	1083	223	23,198
Total					3,972	181,373

■ COCOA CSCE (10 tonnes; $/tonnes)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	1548	+19	1550	1535	45	381
Mar	1578	+19	1581	1562	3,054	48,514
May	1606	+19	1606	1591	553	18,768
Jul	1626	+19	1625	1621	45	4,691
Sep	1644	+19	1635	1635	30	5,736
Dec	1664	+19	1655	1650	30	9,124
Total					3,834	98,493

■ COCOA (ICCO) (SDR's/tonne)

Dec 1	Price	Prev. day
Daily	1220.90	1222.71

■ COFFEE LIFFE (5 tonnes; $/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	1785	+47	1790	1745	4,803	17,925
Mar	1775	+47	1780	1730	5,112	17,076
May	1755	+40	1760	1717	1,620	5,008
Sep	1745	+35	1724	1721	81	425
Nov	1750	+35	-	-	-	30
Total					11,514	41,802

■ COFFEE 'C' CSCE (37,500lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	175.50	+8.30	176.50	167.00	333	1,190
Mar	168.50	+5.80	170.25	161.25	9,574	13,051
May	162.15	+5.70	162.50	155.50	927	4,853
Jul	155.75	+5.50	156.00	149.50	225	2,480
Sep	148.25	+3.75	150.00	145.00	50	1,198
Dec	142.25	+2.25	143.50	138.00	77	934
Total					11,185	23,839

■ COFFEE (ICO) (US cents/pound)

Dec 1		Prev. day
Comp. daily	126.72	n/c
15 day average	120.23	n/c

■ WHITE SUGAR LIFFE (50 tonnes; $/tonne)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	311.1	-1.6	312.5	311.4	542	22,749
May	316.1	-1.8	317.4	316.4	603	5,368
Aug	318.5	-1.4	319.4	318.4	533	4,724
Oct	312.5	-2.7	313.9	312.7	249	3,514
Dec	311.5	-2.5	316.0	316.0	-	142
Total					1,927	36,672

■ SUGAR '11' CSCE (112,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Mar	12.45	-0.04	12.50	12.39	39,247	113k
May	12.36	-0.05	12.41	12.31	6,936	32,730
Jul	12.04	-0.06	12.11	12.00	5,132	28,325
Oct	11.79	-0.11	11.89	11.79	2,540	22,777
Mar	11.58	-0.11	11.65	11.65	172	6,088
May	11.53	-0.11	11.64	11.64	42	915
Total					54,129	202,528

■ COTTON NYCE (50,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Dec	68.20	-1.15	69.50	67.25	352	461
Mar	69.79	-0.34	70.13	69.13	6,134	43,053
May	71.14	-0.32	71.30	70.50	2,268	13,451
Jul	72.20	-0.30	72.40	71.15	1,758	13,052
Oct	73.70	-0.13	74.20	73.35	96	1,010
Dec	74.01	-	74.15	73.81	493	10,564
Total					11,105	82,833

■ ORANGE JUICE NYCE (15,000lbs; cents/lbs)

	Sett price	Day's change	High	Low	Vol	Open int
Jan	80.15	-2.20	83.25	80.00	2,040	22,848
Mar	83.40	-2.10	86.40	83.30	1,720	14,524
May	86.60	-1.90	89.10	86.60	195	3,487
Jul	89.50	-1.90	91.75	89.50	72	1,874
Sep	92.25	-1.90	-	-	23	938
Nov	94.25	-1.90	96.00	95.00	11	-
Total					4,061	44,872

VOLUME DATA
Open interest and Volume data shown for contracts traded on COMEX, NYMEX, CBT, NYCE, CME, CSCE and IPE Crude Oil are one day in arrears. Volume & Open Interest totals are for all traded months.

INDICES

■ Reuters (Base: 18/9/31 = 100)

Dec 2	Dec 1	month ago	year ago
1793.9	1795.5	1821.7	1863.2

■ CRB Futures (Base: 1967 = 100)

Dec 1	Nov 28	month ago	year ago
236.96	235.55	-	-

■ GSCI Spot (Base: 1970 = 100)

Dec 1	Nov 28	month ago	year ago
189.38	188.69	205.63	218.98

LME WAREHOUSE STOCKS (tonnes)

Aluminium	-1,975	to	668,425
Aluminium alloy	-100	to	43,340
Copper	+2,175	to	340,900
Lead	-300	to	116,450
Nickel	-348	to	66,306
Zinc	+2,950	to	497,650
Tin	+170	to	8,280

MEAT AND LIVESTOCK

■ LIVE CATTLE CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open Int
Dec	67.150	+0.325	67.225	66.650	8,111	18,754
Feb	67.800	+0.150	67.950	67.475	18,059	45,441
Apr	71.425	-0.025	71.600	71.225	4,864	20,212
Jun	69.875	+0.050	70.000	69.725	1,179	12,915
Aug	70.350	+0.100	70.400	70.175	542	4,718
Oct	72.625	+0.375	72.650	72.450	128	1,298
Total					30,896	103,408

■ LEAN HOGS CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open Int
Dec	62.075	-0.425	62.500	61.800	2,340	9,709
Feb	59.925	-0.300	60.450	59.800	3,518	17,835
Apr	57.075	-0.100	57.400	57.000	1,085	6,871
Jun	65.375	-0.175	65.675	65.150	228	3,951
Jul	64.150	-0.250	64.500	64.150	35	1,286
Aug	61.875	-0.175	62.000	61.700	16	217
Total					7,222	49,549

■ PORK BELLIES CME (40,000lbs; cents/lbs)

	Sett Price	Day's change	High	Low	Vol	Open Int
Feb	57.800	+1.025	57.900	56.700	1,107	7,012
Mar	56.150	+0.450	56.550	55.700	224	1,154
May	55.850	+1.200	56.900	55.750	26	557
Jul	56.300	-	56.700	55.700	18	395
Aug	53.225	-0.050	53.650	53.250	7	54
Total					1,376	9,186

LONDON TRADED OPTIONS

Strike price $ tonne — Calls — — Puts —

■ ALUMINIUM (99.7%) LME	Jan	Apr	Jan	Apr
1500	87	112	4	21
1600	21	53	38	60
1700	2	20	118	125
■ COPPER (Grade A) LME	**Jan**	**Apr**	**Jan**	**Apr**
1700	138	174	12	31
1800	68	110	42	65
1900	27	64	100	117
■ COFFEE LIFFE	**Jan**	**Mar**	**Jan**	**Mar**
1700	102	145	17	70
1750	70	109	33	84
1800	41	87	56	112
■ COCOA LIFFE	**Mar**	**May**	**Mar**	**May**
975	66	84	21	30
1000	51	79	31	40
1025	38	66	44	52
■ BRENT CRUDE IPE	**Jan**	**Feb**	**Jan**	**Feb**
1850	15	46	49	76
1900	5	29	-	-
1950	-	-	-	-

LONDON SPOT MARKETS

■ CRUDE OIL FOB (per barrel)

		+or-
Dubai	$17.28-7.38w	+0.065
Brent Blend (dated)	$17.87-7.89	-0.145
Brent Blend (Jan)	$18.17-8.19	+0.025
W.T.I.	$18.75-8.77w	-0.130

■ OIL PRODUCTS NWE prompt delivery CIF (tonne)

Premium Gasoline	$187-189	+1
Gas Oil	$169-172	
Heavy Fuel Oil	$94-96	-2
Naphtha	$180-181	-1
Jet fuel	$189-191	+1
Diesel	$180-182	+1.5

■ NATURAL GAS (Pence/therm)

Bacton (Jan)	17.90-18.00	-0.30

Petroleum Argus. Tel. London (0171) 359 8792

■ OTHER

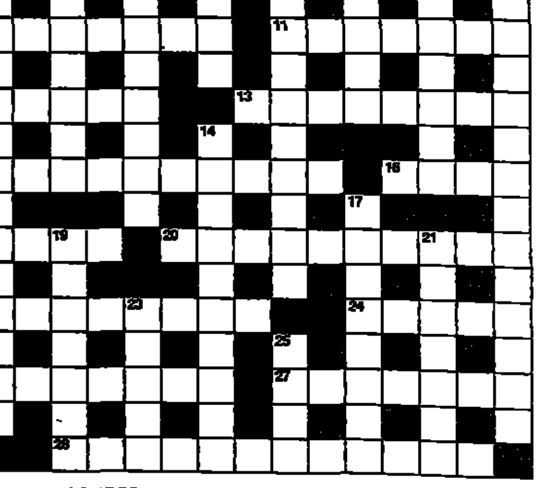
Gold (per troy oz)♣	$294.65	+0.90
Silver (per troy oz)♣	534.00c	+13.00
Platinum (per troy oz.)	$388.00	+4.50
Palladium (per troy oz.)	$209.25	+4.25
Copper	89.0c	
Lead (US prod.)	45.00c	
Tin (Kuala Lumpur)	19.57r	
Tin (New York)	271.5	
Cattle (live weight)	91.20p	-0.65*
Sheep (live weight)	92.51p	-8.21*
Pigs (live weight)†	81.77p	-2.68*
Lon. day sugar (raw)	$297.60	+4.80
Lon. day sugar (wte)	$303.20	+1.20
Barley (Eng. feed)	Unq	
Maize (US No3 Yellow)	£109.00	
Wheat (US Dark North)	Unq	
Rubber (Dec)♥	54.50p	
Rubber (Jan)♥	54.50p	
Rubber (KL RSS No1)	275.5z	-1.5
Coconut Oil (Phil)§	595.0y	-5.0
Palm Oil (Malay.)§	620.0w	-10.0
Copra (Phil)§	$407.5	+5.0
Soyabeans (US)	186.0	
Cotton Outlook'A' index	76.90c	
Wooltops (64s Super)	396p	

£ per tonne unless otherwise stated. p pence/kg. c cents/lb. r ringgit/kg. m Malaysian cents/kg. y Dec/Jan. z Nov/Dec. w Jan. ♥London Physical. § CIF Rotterdam. ♣ Bullion market close. * Change on week. †Based on 4,650 head of pigs sold.

JOTTER PAD

CROSSWORD

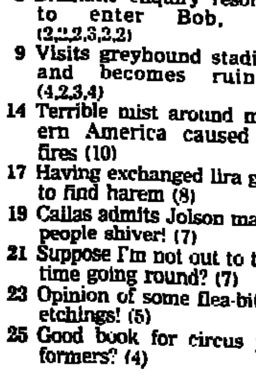
No.9,548 Set by GRIFFIN



ACROSS
1 Filming famous actress with a heavenly body! (8,4)
10 Manage to find poetry in Old English (7)
11 Singer needing work dashed in, therefore (7)
12 Woman the lizard bit (5)
13 Possibly insure it because of nerve disease (8)
15 Helping to hold glue that's tacky as a rule (10)
16 Tried to drop journalist from head office group (4)
18 Resistance units only helped married soldiers initially (4)
20 One member finished replacing his exhaust (10)
22 Blabbermouth has to count the first drink (4-4)
24 Inexperienced, but back in time to get prize (5)
26 Ban on SF film title (7)
27 California fish trade (7)
28 Breaking up solid matters is a poser (7,5)

DOWN
2 Taking notice of man holding racket, for example (7)
3 Old boy running Castle Bar (8)
4 First person to be cross with goat! (4)
5 Mollusc grasped too loosely (10)
6 To upset salesman gets drunk (5)
7 Performer about to start making a pile (7)
8 Dramatic enquiry resolved to enter Bob, too (2,2,2,3,2,2)
9 Visits greyhound stadium and becomes ruined? (4,2,3,4)
14 Terrible mist around modern America caused by fires (10)
17 Having exchanged lira goes to find harem (8)
19 Callas admits Jolson makes people shiver! (7)
21 Suppose I'm not out to take time going round? (7)
23 Opinion of some flea-bitten etchings! (5)
25 Good book for circus performers? (4)

Solution 9,547



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FT MANAGED FUNDS SERVICE

Offshore Funds

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

OFFSHORE AND OVERSEAS

BERMUDA (FSA RECOGNISED)

[illegible]

BERMUDA (REGULATED)(**)

[illegible]

GUERNSEY (FSA RECOGNISED)

[illegible]

GUERNSEY (REGULATED)(**)

[illegible]

IRELAND (FSA RECOGNISED)

[illegible]

IRELAND (REGULATED)(**)

[illegible]

ISLE OF MAN (FSA RECOGNISED)

[illegible]

ISLE OF MAN (REGULATED)(**)

[illegible]

JERSEY (FSA RECOGNISED)

[illegible]

JERSEY (REGULATED)(**)

[illegible]

LUXEMBOURG (FSA RECOGNISED)

[illegible]

Offshore Funds and Insurances

FT MANAGED FUNDS SERVICE

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

BAII Asset Management Ltd
13 Piccadilly London W1J 0BE 0171 734 3780

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
[illegible]		$873.25		+0.82	–
Intermediate Fund					
Convertible [illegible]		$772.57		–	–
Convertible [illegible]		[illegible]		–	–

Bank Von Ernst & Cie AG
[illegible] Bern, Switzerland 0041 [illegible]

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
UK Equity		[illegible]		+0.28	–
UK Smaller Co's Equity		[illegible]		[illegible]	–
N/th American Equity		[illegible]		-0.41	–
US Smaller Co's Equity		[illegible]		+0.18	–
Pacific Basin Equity		[illegible]		[illegible]	–
Japanese Equity		Y451		+2	–
European Equity		[illegible]		+0.29	–
Swiss Equity		[illegible]		+0.24	–
Sterling Fixed Int		[illegible]		-0.01	–
Sterling Fixed Int Cap		[illegible]		–	–
European Fixed Int		[illegible]		[illegible]	–
European Fixed Int Cap		[illegible]		+0.02	–
DM Bond Cap		[illegible]		+0.01	–
DM Short Term Cap		[illegible]		–	–
Global Equity		[illegible]		+0.36	–
Global Bond		[illegible]		[illegible]	–
Global Bond Dlr		[illegible]		-0.01	–
Global Manager		[illegible]		+0.48	–
Swiss Franc Short Term Dis		[illegible]		[illegible]	–
Swiss Franc Short Term Cap		[illegible]		+0.01	–
Swiss Franc Bonds Div		[illegible]		[illegible]	–
Swiss Franc Bonds Cap		[illegible]		–	–

Banque Indosuez
39 Allée Scheffer, L-2520 Luxembourg 00352 47671

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
Indosuez European Small Cos		DM14.72		–	–
Indosuez Multimedia		$19.15		–	–

Barclays Diversified Portfolio (z)
50 [illegible], L-2951 352 4799 2939

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
BPB Deutschmark Reserve	1	[illegible]		–	–
BPB Sterling Reserve	1	[illegible]		–	–
BPB US Dollar Reserve	1	[illegible]		–	–
BPB European Bond	3½	[illegible]		–	–
BPB North American Bond	3½	[illegible]		–	–
BPB Emerging Markets		$17.09		–	–
BPB Europe	3½	[illegible]		–	–
BPB Japan	3½	[illegible]		–	–
BPB Pacific Rim	3½	[illegible]		–	–
BPB United Kingdom	3½	[illegible]		–	–
BPB United States	3½	[illegible]		–	–
BPB Hedged Global Bd [illegible]		[illegible]		–	–
BPB Hedged Global Bd Stg	¼	[illegible]		–	–
BPB Hedged Global Bd FFr		[illegible]		–	–

Barclays Inv Funds (Luxembourg)
26 Place de la Gare, L-1616 00 352 404344

[illegible]

Frontrunner I (s)
672 rue de Neudorf, Luxembourg 00 352 43667550

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
European Value Fd		Ecu166.59		–	–
Global Bond Fd		DFr779.39		–	–
Global Bond Fd		DM157.58		–	–
Sterling Bond Fd		£200.13		–	–
Danish Bond Fd		DKr186.20		–	–
Swedish Bond Fd	3	SKr133.02		–	–
German Bond Fd		DM107.77		–	–
Dollar Bond Fd	3	$103.55		–	–
Scandinavian Value Fd		Ecu279.30		–	–
Far East Value Fd		[illegible]		–	–
North American Value Fd	5	$113.99		–	–
Danish Kroner Reserve		DKr112.16		–	–
Swedish Kroner Reserve		SKr118.02		–	–
German Mark Reserve		DM109.80		–	–
US Dollar Reserve	3	$102.77		–	–
ECU Reserve		Ecu112.17		–	–
Norwegian Kroner Reserve		NKr101.00		–	–
Danish 2/1998	3	DM120.39		–	–
Bonds 2/1998	3	DM103.75		–	–
Bonds 2/1999		DM102.84		–	–
Danish Mortgage Bond Fd		DKr104.11		–	–
Danish Long Bond Fd	3	DKr107.25		–	–
Danish Equity Fd		DKr100.64		–	–
Swedish Equity Fd	5	SKr100.29		–	–
Norwegian Equity Fd	5	NKr99.87		–	–
European Equity Fd	5	Ecu99.54		–	–

GT Global
(44) 171 710 4567 London (852) 2842 7200 Hong Kong

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
GT Europe A		$92.54	98.88	+0.34	0.13
GT Europe A		£49.09	51.67	+0.20	0.13
GT Europe B		$92.92		+0.34	0.15
GT Europe B		£49.32		+0.20	0.15
GT Investment A		$37.56	39.54	+0.35	1.18
GT Investment A		£22.34	23.52	+0.21	1.18
GT Investment B		$37.74		+0.38	1.20
GT Investment B		£22.45		+0.21	1.20
GT US Small Cos A		$42.17	44.39	+0.28	0.00
GT US Small Cos A		£25.08	26.40	+0.17	0.00
GT US Small Cos B		$42.37		+0.27	–
GT US Small Cos B		£25.20		+0.16	0.00

HSBC Investment Funds Luxembourg SA (a)
7 rue du Marché – aux – Herbes L-1728 Luxembourg
Dealing: 00 352 47681220 Fax 475569

HSBC Global Investment Funds
International and Regional Funds

	Init Chrge	Selling Price	Buying Price	+ or -	Yield Gr's
Asian Equity		$20.43	21.57	+0.57	–
European Equity	5¼	$10.10	10.66	+0.15	–
Global Emerging Eq		$8.31	8.78	+0.07	–
Global Opportunities		$18.37	19.39	+0.30	–
North American Equity		$21.88	23.10	+0.40	0.09
Pan-European Equity		$19.07	20.13	+0.42	–

[illegible]

LUXEMBOURG (REGULATED)(**)

[illegible]

OFFSHORE INSURANCES

[illegible]

FT MANAGED FUNDS SERVICE

Offshore Insurances and Other Funds

● FT Cityline Unit Trust Prices are available over the telephone. Call the FT Cityline Help Desk on (+44 171) 873 4378 for more details.

OTHER OFFSHORE FUNDS

LONDON SHARE SERVICE

ALCOHOLIC BEVERAGES

BANKS, RETAIL

BREWERIES, PUBS & REST

BUILDING & CONSTRUCTION

BUILDING MATS. & MERCHANTS

CHEMICALS

CHEMICALS - Cont.

DISTRIBUTORS

DIVERSIFIED INDUSTRIALS

ELECTRICITY

ELECTRONIC & ELECTRICAL EQPT

ENGINEERING

ENGINEERING - Cont.

ENGINEERING, VEHICLES

EXTRACTIVE INDUSTRIES

EXTRACTIVE INDUSTRIES - Cont.

FOOD PRODUCERS

GAS DISTRIBUTION

HEALTH CARE

HEALTH CARE - Cont.

HOUSEHOLD GOODS

INSURANCE

INVESTMENT TRUSTS

Approved by the Inland Revenue

INVESTMENT TRUSTS - Cont.

INV TRUSTS SPLIT CAPITAL

Approved by the Inland Revenue

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LONDON SHARE SERVICE

OTHER INVESTMENT TRUSTS

The following investment trusts are not eligible for inclusion in the FT-SE Actuaries Share Indices.

INVESTMENT COMPANIES

LEISURE & HOTELS

LIFE ASSURANCE

MEDIA

MEDIA - Cont.

OIL EXPLORATION & PRODUCTION

OIL, INTEGRATED

OTHER FINANCIAL

PAPER, PACKAGING & PRINTING

PHARMACEUTICALS

PROPERTY

PROPERTY - Cont.

RETAILERS, FOOD

RETAILERS, GENERAL

RETAILERS, GENERAL - Cont.

SUPPORT SERVICES

SUPPORT SERVICES - Cont.

TELECOMMUNICATIONS

TEXTILES & APPAREL

TOBACCO

TRANSPORT

WATER

AIM

AIM - Cont.

AMERICANS

CANADIANS

SOUTH AFRICANS

	Notes	Price	+ or -	52 week high	low	Mkt Cap£m	Yld Gr's	P/E
Anglo Am Ind R		£23¼		*£27⅜	£21⅞	1,781	2.9	ϕ
Barlow	ϕ	559	+14	897	551	1,187	2.7	ϕ
Gold Flds Prop R		119½		187	119½	12.2	6.7	10.0
SA Brews	†	£14	+½	£23	£13	4,384	2.4	–
Standard Bank		£26	+13	£30	£21	3,129	2.0	–
Tiger Oats		830		1100	780	1,254	2.3	ϕ
Tongaat-Hulett		732	+1	780	719½	738.6	2.4	ϕ

TRADED INDEX SECURITIES

	Notes	Price	+ or -	52 week high	low	Mkt Cap£m	Yld Gr's	P/E
FTSE 100 TRAINS		$[illegible]		$[illegible]	£470	–	–	–

GUIDE TO LONDON SHARE SERVICE

Prices for the London Share Service are delivered by Extel, part of Financial Times Information.

Company classifications are based on those used for the FTSE Actuaries Share Indices.

Closing mid-prices are shown in pence unless otherwise stated. For FTSE 100 index constituents and reserves marked † in the Trading Volume table on the LSE page, last trade prices at or prior to 4.30pm market close are shown, as these shares are now traded on the Stock Exchange Electronic Trading System ("SETS"). Highs and lows are based on intra-day mid-prices/last trades over a rolling 52 week period.

Where stocks are denominated in currencies other than sterling, this is indicated after the name. Prices shown for some of these foreign securities are converted into sterling from latest available local Stock Exchange prices.

Symbols referring to dividend status appear in the notes column daily as a guide to yields and P/E ratios. Dividends and Dividend covers are published on Monday.

Market capitalisation shown is calculated separately for each line of stock quoted.

Earnings used in calculations are based on IMR 'Headline Earnings' formula.

Price/earnings ratios are based on latest annual reports and accounts and, where possible, are updated on interim figures.

Yields are based on mid-prices, are gross, adjusted for a dividend tax credit of 20 per cent and allow for value of declared distribution and rights.

Estimated Net Asset Values (NAVs) are shown for Investment Trusts, in pence per share, along with the percentage discounts (Dis) or premiums (Pm -) to the current closing share price. The NAV basis assumes prior charges at par value, convertibles converted and warrants exercised if dilution occurs.

- * Highs and lows marked thus have been adjusted to allow for capital changes
- † Interim since increased or resumed
- ‡ Interim since reduced, passed or deferred
- ϕ Figures or report awaited
- ♥ Rule 2.1(a)(iv) Overseas incorporated companies listed on an approved exchange.
- ♣ Free annual/interim report available, see details below.
- ‡‡ Rule 4.2(a) Irish incorporated non-listed companies.
- # Price at time of suspension
- ¶ Indicated dividend yield after pending scrip and/or rights issue
- ♦ Merger bid or reorganisation in progress
- § Forecast dividend yield; p/e based on earnings updated by latest interim statement.
- ♠ Unregulated collective investment scheme.

a Yield based on annualised dividend. b Figures based on prospectus or other official estimates. g Assumed dividend yield after rights issue. h Assumed dividend yield after scrip issue. p Rights issue pending. q Earnings based on preliminary figures. s Dividend yield excludes a special payment. t Indicated dividend yield, p/e ratio based on latest annual earnings. u Forecast, or estimated annualised dividend yield, p/e based on previous year's earnings. z Dividend yield includes a special payment. F Yield based on prospectus or other official estimates for 1996-97. G Assumed yield after pending scrip and/or rights issue. H Yield based on prospectus or other official estimates for 1997. K Yield based on prospectus or other official estimates for 1998. L Estimated annualised yield, p/e based on latest annual earnings. M Yield based on prospectus or other official estimates for 1997-98. N Dividend is paid in whole or part as a FID (Foreign Income Dividend). R Forecast annualised yield, p/e based on prospectus or other official estimates. W Pro forma figures. Z Dividend yield to date.

Abbreviations: xd ex dividend; xc ex scrip issue; xr ex rights; xa ex all; xl ex capital distribution.

This service is available to companies whose shares are regularly traded in the United Kingdom for a fee of £1425 a year for each security shown, subject to the Editor's discretion.

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LONDON STOCK EXCHANGE

Footsie launches another advance on 5,000

MARKET REPORT

By Steve Thompson, UK Stock Market Editor

London shares built strongly on Monday's surge, delivering a ready response to a further round of confidence-boosting performances from overseas markets.

Once again it was Wall Street that provided the initial impetus for global markets. The Dow Jones Industrial Average moved up 189 points – its fourth biggest ever rise in points terms – passing the 8,000 level in the process. At its best, the Dow was more than 225 points ahead.

More good news for European markets came from Hong Kong where the Hang Seng index posted a 4.3 per cent rise, more than offsetting a relatively modest fall in Tokyo and another dip by the Seoul market.

The FTSE 100 index finished a relatively brisk trading day 55.8 higher at 4,977.6, having hit a session high of 4,980.1 as Wall Street rallied from a slightly uneven opening to post a near-20 point gain early yesterday.

Over the past two sessions Footsie has rallied 145.8 or 3 per cent, a rise fuelled mainly by the exceptional strength of Wall Street and a strong recommendation for UK stocks from Merrill Lynch, the US broker.

The other FTSE indices continued to lag the 100 index, however, with the FTSE 250 only able to muster a 10.8 improvement at 4,668.4 and the FTSE SmallCap up 1.9 at 2,275.0.

Apart from the overall strength in the leaders, the trading session was highlighted by numerous individual features, including the much-heralded sale of National Westminster Bank's loss-making equities and derivatives divisions, which make up NatWest Markets.

There was more takeover activity yesterday, with Merrydown, the cider and "alcopops" maker, accompanying its lapse into losses in the half-year with news that it had received a takeover approach. Other takeover stories circulating in the market included Hambros, one of the few remaining UK merchant banks and BICC, the heavy electrical and engineering group.

The financial areas of the market were alive with talk of "the race for mergers", a race which was said by dealers to have been set in motion by NatWest's release from its investment banking ambitions. There was growing intensity yesterday to the story that a merger with Halifax was looking increasingly likely.

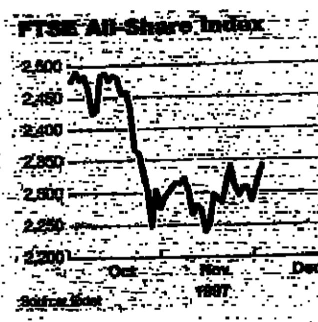
The FTSE 100's splendid performance over the past two days, which has seen the index recoup all the losses suffered last week, will be tested by economic news emerging during the rest of the week.

First, London has to face the outcome of the monetary policy committee meeting, which announces at noon on Thursday its decision on whether to increase domestic interest rates.

And Friday brings the US non-farm payroll report for November, always a key factor in whether the US Federal Reserve changes interest rates. The Fed's open market committee is scheduled to meet on December 16.

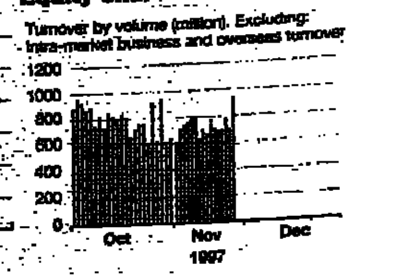
Turnover in equities was 702.5m shares, of which 44 per cent was in non-Footsie stocks.

FTSE All-Share Index



Equity shares traded

Turnover by volume (million). Excluding: intra-market business and overseas turnover



Indices and ratios

FTSE 100	4977.6	+55.8
FTSE 250	4668.4	+10.8
FTSE 350	2396.6	+22.8
FTSE All-Share	2341.68	+20.92
FTSE All-Share yield	3.33	3.36

FT 30	3205.2	+23.0
FTSE Non-Fins p/e	19.73	19.65
FTSE100 Fut Dec	5010.0	+45.0
10 yr Gilt yield	6.56	6.56
Long gilt/equity yld ratio	1.95	1.95

Best performing sectors

1. Banks: Retail ..... +2.5
2. Insurance ..... +2.0
3. Life Assurance ..... +2.0
4. Retailers: Food ..... +1.7
5. Food Producers ..... +1.7

Worst performing sectors

1. Tobacco ..... -0.8
2. Alcoholic Beverages ..... -0.5
3. Building Matls ..... -0.3
4. Building & Construction ..... -0.3
5. Chemicals ..... -0.2

Takeover hints at NatWest

By Peter John and Joel Kibazo

The news that National Westminster is disposing of its securities arm set the clock ticking on the next round of consolidation among the UK's financial stocks.

The actual announcement was seen as the pronouncement from a leaky and very rusty ship. One analyst said: "NatWest seems less interested in shareholder value than in comparing itself with Barclays. The choice there is very much between a rock and a hard place."

But now that the long-vaunted disposal is out in the open, analysts are keen to see how NatWest will reposition itself. The initial thoughts were of a merger with **Prudential** to create a £30bn company that could compete in size with **Lloyds TSB**. Some dealers were also citing **Halifax** as a possible bedfellow.

The consolidation story does not stop there. Barclays, which last month disposed of a large chunk of its BZW securities arm to CSFB, would be left trailing if NatWest did a deal. The bank might want to make its own move into the life market and go for a company such as **Legal & General**.

NatWest, which was weak on the disposal announcement, ended 13 higher at 898p on the takeover talk while the Pru jumped 16½ to 653½p. Barclays rose 20 to £14.65. Lloyds TSB 34 to 718p despite a BZW downgrade, Halifax 19 to 714½p and Legal & General 12½ to 520p.

The announcement by **Royal & Sun Alliance** of a new group chief executive came after the market closed. Dealers welcomed the news and said the shares, already strong performers yesterday, would outperform the market this morning.

The promotion of Robert Mendelsohn, recently headhunted from WR Berkeley of the US, struck the right note with several analysts. David Hudson of Credit Lyonnais Laing said: "He is very, very highly regarded. He will be seen as just the right guy."

And while group earnings are predicted to slide over the next couple of years, the appointment removes concerns about rumoured differences between the deputy chairman and the previous group chief executive. The shares rose 14 to 560p.

Strong insurances

Other insurance stocks also made strong progress, notably Commercial Union which settled a net 25 up at 848p and General Accident, up 10 at £10.35.

The UK government's announcement of a cap on tax-free personal investment acted like a hammer blow on **Perpetual** and took away the gloss provided by the recent sector consolidation.

The fund manager is the UK's largest provider of personal equity plans, and also has more than half its business linked to them.

Its shares had raced ahead after Merill Lynch made its recent offer for Mercury Asset Management. Perpetual had also put a guarded "for sale" sign in the window in anticipation of the problems that the new Individual Savings Accounts would pose.

Yesterday, however, Perpetual signalled it was unlikely to attract a buyer until the fall-out from the £50,000-per-person cap faded away. The shares were off almost 10 per cent at one stage but closed 177½ down at £24.20, the worst performance in the FTSE 250. M&G, meanwhile, dropped 42½ to £13.53½.

Construction and cables group BICC was the best performing stock in the FTSE 250 as takeover talk and a broker's recommendation boosted the shares. They gained 10 or 6.58 per cent to 162p.

Bid talk once again did the rounds in the market as a recommendation from Henderson Crosthwaite also helped boost sentiment. The broker which held an investors' dinner for the company on Monday, yesterday upgraded its recommendation from "hold" to "buy".

Analyst Richard Dunn said: "The management has taken decisive steps to stem losses in the energy cables business in Italy and Germany. Additionally, the construction business seems to be staging a strong recovery with considerable scope for margin improvement over the next 2 to 3 years."

Shares in mobile phones company Vodafone Group gave up 10¼ to 387½p after broker Credit Lyonnais Laing cut its rating on the stock from "buy" to "hold".

The broker cited valuation reasons for the move. "They've had a very good run and and we think the shares will now pause for breath," said the broker. Vodafone's share price has moved strongly over the past week and reached an all-time closing high of 398p on Monday.

Turnover in **British Telecommunications** was 13m, of which 3m was as a result of a large tax-related "bed-and-breakfast" deal. The shares hardened 3¼ to 468¾p.

Earlier this week the group dismissed as market speculation rumours that the company was in preliminary merger talks with local US carrier GTE. CLL advised clients to invest instead in **Cable & Wireless**. The shares firmed 2½ to 535p.

Allied Colloids, the chemicals group facing a 155p hostile bid from Hercules of the US, came out with interim figures seen as a firm base for its defence. Peter Cartwright of Williams de Broe was telling clients yesterday the detail in the figures suggested Allied would be safe unless Hercules could offer 200p a share. Allied ended up a penny at 169p.

Merrydown cheer

Shares in British drinks manufacturer Merrydown jumped almost 30 per cent after the company said it was in talks which may lead to an offer being made for it.

News of the offer came as the group reported a first-half loss of £0.94m – including exceptional costs of £0.63m – compared with a profit of £0.67m a year earlier. Merrydown also said it would not be paying an interim dividend.

The prospects for further consolidation within the sector were renewed as Holliday Chemicals said it was in talks that could lead to an offer. Holliday jumped 21¼ to 195p.

Weak underlying crude prices restrained selected oil shares. **Enterprise** shed 2¼ to 581½ with Merrill Lynch telling clients that Lasmo – up a penny at 264p – offered better value.

United Newspapers lifted 4 to 757p on confirmation that the group is selling its provincial newspaper group. It is expected to raise around £400m. Trinity International, Johnston Press, Newsquest and Scottish Radio are all seen as participating in the carve-up. **Dorling Kindersley**, the publisher of CD-Rom books, fell 27½ to 220p after a profits warning.

FT 30 INDEX

	Dec 2	Dec 1	Nov 28	Nov 27	Nov 26	Yr ago	*High	*Low
FT 30	3205.2	3181.2	3135.8	3180.7	3163.5	2810.7	3430.3	2868.8
Ord. div. yield	3.55	3.57	3.62	3.58	3.57	4.04	4.22	3.29
P/E ratio net	20.73	20.58	20.29	20.56	20.57	17.09	22.39	15.8
P/E ratio nil	20.45	20.30	20.01	20.28	20.29	16.93	22.02	15.71

FT 30 since compilation: high 3430.3 16/10/97; low 49.4 16/02/00. Base Date: 1/7/35.

FT 30 hourly changes

Open	9	10	11	12	13	14	15	16	High	Low
3182.4	3204.4	3188.8	3181.8	3184.2	3179.1	3184.1	3185.5	3198.9	3205.3	3177.3

	Dec 2	Dec 1	Nov 28	Nov 27	Nov 26	Yr ago
SEAQ bargains	46,525	46,525	39,824	39,740	41,143	34,436
Equity turnover (£m)†	-	2503.1	2137.6	2720.8	3139.8	873.1
Equity bargains†	-	39,519	35,863	34,442	35,907	19,674
Shares traded (m)†	-	709.0	622.3	743.3	871.7	396.5

†Excluding intra-market and overseas turnover but including Crest turnover.

 *For 1997.

London market data

Rises and falls*		52 Week highs and lows		LIFFE Equity options	
Total Rises	958	Total Highs	70	Total contracts	34,392
Total Falls	512	Total Lows	82	Calls	14,486
Same	1,586			Puts	19,906

Dec 2 *Data based on Equity shares listed on the London Share Service.

FUTURES AND OPTIONS

■ FTSE 100 INDEX FUTURES (LIFFE) £25 per full index point (APT)

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	4985.0	5010.0	+60.0	5016.0	4950.0	8740	60828
Mar	5037.0	5056.0	+60.0	5039.0	5009.0	1633	7931

■ FTSE 250 INDEX FUTURES (LIFFE) £10 per full index point

	Open	Sett price	Change	High	Low	Est. vol	Open int.
Dec	4680.0	4680.0	+7.0	4680.0	4680.0	226	8484
Mar	4755.0	4755.0	+7.0	4755.0	4755.0	226	60

■ FTSE 100 INDEX OPTION (LIFFE) (*4978) £10 per full index point

	4800 C	4800 P	4850 C	4850 P	4900 C	4900 P	4950 C	4950 P	5000 C	5000 P	5050 C	5050 P	5100 C	5100 P	5150 C	5150 P
Dec	254½	40	214½	51½	176	64	138½	80	107½	98½	78½	122	57	153	39½	189
Jan	317½	91	278	102½	243	115	212	135	179½	156	148½	177	123½	203½	99½	233½
Feb	363½	132	346	145	315	163½	284	182½	259½	202	217½	222½	190	248	166½	276
Mar	418	165½	385	182½	353	200½	321½	218½	289½	237½	257½	257	239	281½	286	308½
Jun†	521½	228½			459½	264½			396½	301½			335½	343½		

Calls 4,363 Puts 4,307

■ EURO STYLE FTSE 100 INDEX OPTION (LIFFE) £10 per full index point

	4825 C	4825 P	4875 C	4875 P	4925 C	4925 P	4975 C	4975 P	5025 C	5025 P	5075 C	5075 P	5125 C	5125 P	5175 C	5175 P
Dec	228½	44	189	54½	153	68	128	85	91	106	68	132½	48	162½	32	195½
Jan	298	94½	259½	108	225½	123	192	139½	162	158	134½	181	109	205	86½	232
Feb	361½	135½	327	150	294	166	262½	184	233	203½	205½	225	180	249	156½	274½
Mar	397	170½			328½	200½			269	239			216	283½		
Jun†	598½	232			444½	284			385	300½			327½	339½		

Calls 4,385 Puts 10,993 * Underlying index value. Premiums shown are based on settlement prices. † Long dated expiry months.

LONDON RECENT ISSUES: EQUITIES

Issue price p	Amt paid up	Mkt. cap (£m.)	1997 High	1997 Low	Stock	Close price p	+/-	Net div.	Div. cov.	Grs yld	P/E net
§	F.P.	50.3	100½	99½	Advance UK Tst	100½		-	-	-	-
-	F.P.	31.6	207½	198	BCH Group	199½		RW6.2	1.7	3.9	18.8
-	F.P.	1,354	30½	29½	BG 'B'	30½		-	-	-	-
§90	F.P.	14.4	112½	102½	†CRC	112½		W-	-	-	20.2
§	F.P.	8.92	114	113½	Capital Opps Tst	113½		-	-	-	-
§150	F.P.	8.47	153½	153½	†Cresco Intl	153½		-	-	-	-
-	F.P.	-	£75½	£72½	Fmg Grd Units	£72½		-	-	-	-
*	F.P.	21.8	100	100	Foresight Tech	100		-	-	-	-
*	F.P.	1.20	35	5½	Do Warrants	30		-	-	-	-
*	F.P.	73.5	99½	70½	†Metalarussia	73½		-	-	-	-
§45	F.P.	22.6	57½	50½	†Minorplanet Sys	57½	+3	-	-	-	-
-	F.P.	19.8	128	115½	Nthn Recruitment	121½	+6	L1.73	4.1	1.8	15.3
70	F.P.	24.5	63½	53	Nott'ham Forest	54		-	-	-	-
-	F.P.	7.81	60	6	†Range Cooker Co	6¼		-	-	-	11.8
§95	F.P.	5.58	114½	104½	†Savoy Asset Mngt	113½		W4.08	2.0	4.5	14.0
§250	F.P.	16.0	255	255	Seascope Ship	255		R12.5	2.4	6.1	8.5
§160	F.P.	44.0	175½	160	Tetra	175		L0.8	6.9	0.6	29.3
-	F.P.	56.0	210½	187½	Workplace Tech	193½		RW1.5	5.2	1.0	24.6

† Alternative Investment Market. § Placing price. * Introduction. For a full explanation of all other symbols please refer to The London Share Service notes.

FTSE GOLD MINES INDEX

	Dec 1	% chg on day	Nov 28	Year ago	Gross div yield %	P/E ratio	52 week High	52 week Low
Gold Mines Index (33)	972.14	-0.8	977.82	1872.25	2.89	-	1907.49	972.14
■ Regional Indices								
Africa (15)	978.29	-2.2	1000.89	2213.37	7.27	17.40	2333.56	979.29
Australasia (6)	982.44	+1.8	965.41	2169.56	3.82	12.38	2217.60	951.48
North America (12)	980.13	-0.4	983.59	1738.96	1.31	36.44	1793.48	980.10

 Figures in brackets show number of companies. Basis US Dollars. Base Value: 1000.00 31/12/92. † Partial. Latest prices were unavailable for this edition.

FTSE Actuaries Share Indices — The UK Series

Produced in conjunction with the Faculty and Institute of Actuaries

	Dec 2	Day's chge%	Dec 1	Nov 28	Year ago	Gross yield%	Net yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
FTSE 100	4977.6	+1.1	4921.8	4831.8	4061.5	3.28	2.69	2.08	18.50	138.83	2146.51
FTSE 250	4668.4	+0.2	4657.6	4656.7	4427.6	3.59	2.96	1.77	19.60	139.00	1972.26
FTSE 250 ex IT	4703.8	+0.2	4694.7	4695.9	4468.8	3.71	3.05	1.81	18.60	144.19	1993.93
FTSE 350	2396.6	+1.0	2373.8	2338.8	2015.4	3.34	2.74	2.00	18.70	68.04	2111.39
FTSE 350 ex IT	2400.0	+1.0	2377.0	2341.6	-	3.36	2.75	2.01	18.50	35.10	1084.46
FTSE 350 Higher Yield	2378.0	+0.8	2360.0	2328.2	1922.0	4.32	3.59	1.83	15.83	84.04	1782.14
FTSE 350 Lower Yield	2436.7	+1.1	2399.7	2360.8	2116.2	2.50	2.02	2.26	22.14	52.54	1743.89
FTSE SmallCap	2275.01	+0.1	2273.13	2272.15	2181.29	3.25	2.62	1.63	23.61	61.67	1952.55
FTSE SmallCap ex IT	2279.20	.....	2279.49	2279.70	2161.08	3.48	2.81	1.69	21.19	66.36	1974.67
FTSE All-Share	2341.68	+0.9	2320.76	2288.64	1986.29	3.33	2.73	1.98	18.96	66.27	2093.76
FTSE All-Share ex IT	2346.94	+0.9	2325.74	2293.05	-	3.36	2.76	2.00	18.63	35.52	1079.50

■ FTSE Actuaries Industry Sectors

	Dec 2	Day's chge%	Dec 1	Nov 28	Year ago	Gross yield%	Net yield%	Net cover	P/E ratio	Xd adj. ytd	Total Return
10 MINERAL EXTRACTION(20)	4428.33	+0.9	4387.00	4349.48	3898.56	3.53	2.80	1.81	19.55	140.69	2004.73
12 Extractive Industries(5)	2916.01	.....	2914.89	2886.56	4229.21	4.81	3.42	1.69	13.73	139.54	898.78
15 Oil, Integrated(3)	4879.47	+1.2	4822.81	4777.24	4024.19	3.57	2.88	1.77	19.78	154.87	2273.41
16 Oil Exploration & Prod(12)	3568.84	-0.1	3572.08	3578.28	2927.27	1.60	1.32	2.32	33.63	52.82	2195.19
20 GEN INDUSTRIALS(257)	1988.29	+0.3	1981.81	1971.37	1970.86	3.94	3.34	1.94	16.32	67.67	1150.65
21 Building & Construction(35)	1317.89	-0.3	1321.28	1322.49	1158.91	3.48	2.81	2.31	15.55	40.86	1159.47
22 Building Matls & Merchs(30)	1794.81	-0.3	1799.72	1788.71	1804.39	4.41	3.62	1.84	15.37	85.53	981.05
23 Chemicals(26)	2442.51	-0.2	2447.43	2438.43	2350.21	4.07	3.54	1.71	17.98	91.89	1231.47
24 Diversified Industrials(13)	1332.07	+0.3	1328.43	1316.63	1386.90	5.12	4.81	2.63	8.30	66.24	805.80
25 Electronic & Elect Equip(34)	2171.48	+0.6	2157.82	2154.19	2234.53	4.08	3.28	1.55	19.85	55.80	1184.41
26 Engineering(65)	2707.33	+0.8	2684.78	2657.61	2584.07	3.12	2.62	2.42	16.56	72.59	1721.50
27 Engineering, Vehicles(13)	3368.04	+0.8	3338.01	3340.37	3171.33	2.93	2.47	‡	‡	91.65	1632.53
28 Paper, Pckg & Printing(27)	2134.81	+0.1	2132.80	2132.85	2507.33	4.87	4.00	1.99	12.92	84.16	944.35
29 Textiles & Apparel(14)	1017.60	+0.2	1015.65	1018.05	1079.32	6.82	5.50	1.18	16.00	62.17	682.92
30 CONSUMER GOODS(85)	4738.27	+0.6	4712.18	4575.87	3776.17	3.18	2.72	1.82	21.55	137.10	1849.30
32 Alcoholic Beverages(7)	3210.12	-0.5	3224.78	3180.97	2725.24	3.78	3.36	2.14	15.48	120.20	1236.45
33 Food Producers(25)	3273.18	+1.6	3220.05	3198.71	2665.29	3.30	2.73	1.92	19.68	94.99	1564.46
34 Household Goods(17)	2980.94	+1.1	2948.58	2899.41	2605.00	3.35	2.92	2.49	15.01	89.82	1239.44
36 Health Care(14)	2183.02	+0.5	2171.40	2169.46	2017.63	2.36	1.96	1.81	29.31	52.46	1381.01
37 Pharmaceuticals(19)	7738.43	+0.7	7686.32	7339.72	5801.26	2.41	2.02	1.70	30.46	171.99	2741.04
38 Tobacco(3)	4557.54	-0.8	4593.84	4485.14	3948.00	6.22	5.49	1.60	12.52	240.05	1239.59
40 SERVICES(271)	2835.27	+0.7	2816.47	2788.27	2618.00	2.80	2.34	2.04	21.15	69.55	1542.93
41 Distributors(28)	2525.08	+0.7	2506.44	2512.02	2925.51	3.76	3.07	2.04	16.33	82.56	978.54
42 Leisure & Hotels(30)	3293.80	+0.9	3263.63	3236.90	3226.66	2.89	2.31	2.18	19.82	86.30	1838.34
43 Media(41)	4174.14	+0.6	4150.46	4125.83	4268.83	2.43	2.02	1.90	27.13	92.29	1562.88
44 Retailers, Food(15)	2656.10	+1.7	2612.08	2593.78	2073.93	3.17	2.54	2.28	17.30	72.23	1786.86
45 Retailers, General(53)	2370.96	+0.7	2355.47	2310.61	2132.38	3.06	2.45	2.18	18.78	64.97	1427.57
47 Breweries, Pubs & Rest.(22)	3417.70	+0.6	3397.27	3348.95	3254.58	3.37	2.89	2.33	15.93	88.88	1712.59
48 Support Services(59)	3325.29	+0.2	3317.48	3313.31	2722.50	1.84	1.51	2.40	28.19	42.13	2176.58
49 Transport(23)	2904.92	+0.1	2903.45	2868.62	2614.93	3.53	2.84	1.28	27.89	88.38	1280.70
60 UTILITIES(36)	3381.26	+0.2	3375.81	3347.38	2474.53	3.98	3.21	1.62	19.38	92.89	1582.43
62 Electricity(9)	3729.13	+0.1	3726.63	3695.44	2865.10	5.00	4.00	2.12	11.82	144.37	2138.14
64 Gas Distribution(2)	2507.64	+0.3	2499.41	2480.13	1467.75	2.59	2.07	‡	‡	81.42	1436.28
66 Telecommunications(9)	2627.90	.....	2627.34	2605.86	2062.99	3.35	2.71	1.47	25.36	48.80	1266.23
68 Water(12)	3199.02	+0.6	3178.50	3147.11	2301.85	5.34	4.27	2.21	10.58	103.31	1923.11
69 NON-FINANCIALS(685)	2370.18	+0.5	2357.45	2326.17	2065.87	3.40	2.80	1.87	19.73	67.57	1903.93
70 FINANCIALS(105)	4557.60	+2.1	4475.28	4401.45	3436.86	3.26	2.63	2.41	15.91	131.82	3081.23
71 Banks, Retail(11)	6742.53	+2.5	6575.06	6451.24	4855.20	3.12	2.50	2.53	15.81	188.05	2326.06
73 Insurance(17)	2001.81	+2.0	1961.84	1905.88	1599.13	4.42	3.64	2.78	10.17	84.84	1625.52
74 Life Assurance(8)	5465.45	+2.0	5359.95	5332.70	4005.19	3.34	2.75	2.25	16.53	162.17	2406.27
77 Other Financial(27)	3620.50	+0.5	3603.69	3577.80	2767.37	3.02	2.46	2.06	20.09	90.56	2176.09
79 Property(42)	2144.86	-0.1	2147.28	2125.27	1719.21	3.11	2.49	1.36	29.50	48.93	1389.28
80 INVESTMENT TRUSTS(125)	3324.29	+0.6	3305.99	3284.04	3164.01	2.31	1.85	1.17	46.15	60.65	1198.88
89 FTSE All-Share(895)	2341.68	+0.9	2320.76	2288.64	1986.29	3.33	2.73	1.98	18.96	66.27	2093.76
105 FTSE All-Share ex IT(770)	2346.94	+0.9	2325.74	2293.05	-	3.36	2.76	2.00	18.63	35.52	1079.50
FTSE Fledgling	1243.82	+0.2	1241.28	1240.15	1220.17	3.32	2.68	1.18	31.94	35.37	1360.05
FTSE Fledgling ex IT	1262.66	+0.1	1261.09	1259.93	1234.69	3.62	2.91	1.20	28.69	37.20	1384.68
FTSE AIM	970.6	+0.4	967.1	967.5	-	1.17	0.92	0.64	80.00†	7.16	892.84

■ Hourly movements

	Open	9.00	10.00	11.00	12.00	13.00	14.00	15.00	16.10	High/day	Low/day
FTSE 100	-	4967.1	4946.8	4935.3	4943.1	4940.5	4948.5	4947.4	4977.8	4980.1	4934.0
FTSE 250	-	4681.5	4664.5	4665.0	4664.9	4662.5	4662.6	4664.4	4667.0	4668.4	4661.5
FTSE 350	-	2391.8	2384.2	2379.8	2382.8	2381.6	2384.7	2384.4	2396.5	2397.4	2379.3
FTSE SmallCap	2275.83	2276.46	2275.84	2274.70	2274.81	2275.07	2275.25	2274.84	2274.99	2276.49	2274.45
FTSE All-Share	-	2337.42	2330.45	2326.33	2329.11	2328.00	2330.83	2330.58	2341.61	2342.45	2325.86

Time of FTSE 100 Day's high: 4:16 PM Day's low: 11:22 AM. FTSE 100 1997 High: 5330.8 (03/10/97) Low: 4056.6 (10/01/97)
Time of FTSE All-Share Day's high: 4.16 PM Day's low: 11:22 AM. FTSE All-Share 1997 High: 2492.41 (03/10/97) Low: 1989.78 (02/01/97)

Further information is available on http://www.ftse.com

† Sector P/E ratios greater than 80 and net covers greater than 30 are not shown.
‡ Values are negative.

FTSE INTERNATIONAL

TRADING VOLUME

■ Major Stocks Yesterday

	Vol. 000s	Closing price	Day's change
3i†	1,400	505	+1
AMVESCAP	641	441	+2
ASDA Group†	22,500	164½	+5
Abbey National†	1,800	983	+4
Airtours	447	1180	-5
Alliance & Leicester†	1,400	737½	-2½
Allied Domecq†	3,100	543½	+7
Anglian Water	619	606	-2
Argos	692	611	-3
Arjo Wiggins	1,200	173½	+3½
Assoc. Brit. Foods†	493	554½	+½
Assoc. Brit. Ports	18	282	
BAA†	1,400	507	+7
BAT Inds.†	4,100	542	-5½
BBA	734	370	-3
BOC†	1,000	950	+10
BG†	6,500	282	-1
BP†	8,300	812	+2
BPB	939	342½	+2½
BSkyB†	2,400	458	+11
BT†	13,200	468¾	+3¼
BTR†	9,400	206	
Bank of Scotland†	4,400	538	+17½
Barclays†	4,200	1465	+20
Bass†	1,100	874	+10
Billiton†	2,800	145½	-1
Blue Circle†	926	350	-3
Boots†	1,600	924	+26
Britannic	110	984	-3½
Brit. Aerospace†	705	1650	+15
British Airways†	7,000	544½	-14½
British Biotech	2,400	119½	-4
British Borneo	419	444½	+3
British Energy	1,200	403½	-3½
British Land†	496	670	-10
British Steel†	8,900	141½	+1¾
Burmah Castrol	149	995	-3
Burton	8,100	147¾	
Cable & Wire†	2,700	535	+2½
Cadbury Schweppes†	1,300	650	+20
Caradon	1,900	188	+1
Carlton Comms.†	6,800	483	+18
Centrica†	16,300	91½	+2
Comm. Union†	1,100	848	+25
Compass	975	706	
Cookson	1,100	202½	+1
Courtaulds	2,300	282	+2½
Daily Mail A	16	1785	
Danka	173	545	-6
Dixons†	1,100	677	+2
EMAP	373	883½	+15½
EMI†	2,200	458	+8
Electrocomps	873	428	+13
Energy Group†	800	831	-3
Enterprise Oil†	1,300	581½	-2½
Flextech	3	558	-1
Foreign & Col. I.T.	331	168½	+1
Gallaher	2,000	325	+1½
Gen. Accident†	365	1035	+10
General Elect.†	4,180	390	+3
Glaxo Wellcome†	7,100	1350	+10
Granada†	1,900	849½	-½
Grand Met.†	8,700	542	-6
GUS†	689	715	
Greenalls	456	397½	+6½
GRE†	2,300	307	+5¾
GKN†	538	1301	+10
Guinness†	3,500	542½	-4
HSBC (75p shs)†	1,900	1597	+24
HSBC (HK$10)†	3,200	1624	+46
Halifax†	3,700	714½	+19
Hammerson	634	482½	-1
Hanson	1,900	298	-3
Hays†	535	748	+3½
Hillsdown	222	155	-½
Hyder	112	940	
IMI	130	354½	-4½
ICI†	1,400	887	-19
Imperial Tobacco	1,000	393½	-1½
Inchcape	236	210	
Johnson Matthey	337	542½	-2½
Kingfisher†	4,200	854	+19
Ladbroke†	5,500	264	+9¼
Land Securities†	882	980	+5
Laporte	698	635	+1
Legal & General†	2,600	520	+12½
Liberty Intl.	93	493½	-1
Lloyds TSB†	15,200	718	+34
LASMO†	1,300	264	+1
LucasVarity†	4,200	191¼	+2
MEPC	208	533	+1½
Marks & Spencer†	2,900	630	
Mercury Asset Man	468	1675	-3
Misys	254	1880	+11½
Morgan Crucible	33	439½	-½
Morrison (Wm.)	20	205½	+½
NFC	757	142	+2
NatWest Bank†	7,200	898	+13
National Grid†	17,600	300	-2
National Power†	3,800	573	+3
Next†	2,100	745	+5
Northern Foods	1,200	270½	+8
Northern Rock	1,900	486½	+4
Norwich Union†	3,800	369	+6
Nycomed Amersham	296	2057½	+32½
Orange†	1,500	257½	+5½
Pearson†	1,600	830	+3
P & O†	886	660	+13
Pilkington	7,000	124½	+¼
PowerGen†	1,500	770	-5
Premier Farnell	328	403½	
Provident Financial	343	723½	+8
Prudential†	2,400	653½	+16½
REXAM	904	288	-1
RMC†	358	922	+8
Railtrack†	1,600	1020	+5
Rank Group†	824	355	+8¼
Reckitt & Colman†	983	900	+13
Redland	458	342½	
Reed Intl.†	2,000	637	-2
Rentokil Initial†	2,900	247¼	-1¾
Reuters†	3,000	682	-4
Rio Tinto†	3,200	729	+3
Rolls Royce†	4,200	241	+1
Royal & Sun Allice†	3,100	560	+14
Royal Bk Scotland†	6,700	884	+6
Safeway†	9,800	323½	+1¼
Sainsbury†	5,900	501	+4
Schroders†	432	1857	+87
Schroders N/V†	9	1715	-15
Scottish & New.†	1,700	724	+9½
Scot. Hydro-Elect.	2,400	480	+5
Scottish Power†	1,700	480½	+2½
Sears	1,800	49	+½
Securicor	201	274	-2
Sema	206	1337	+22
Severn Trent†	729	970	+6
Shell Transport†	22,100	421	+9½
Siebe†	2,500	1163	+38
Slough Ests	76	345½	
Smith (W.H.)	921	386	+½
Smith & Nephew	1,800	169	-¾
SmKl Beecham†	7,500	609	+11
Smiths Inds.†	496	796	+19
Southern Elect	651	488	+5
South West Water	106	905	+4
Stagecoach	1,700	764	+1
Standard Chartd.†	2,400	715	+34
Storehouse	1,700	243½	+2
Sun Life & Prov.†	612	400	+8
TI Group†	2,300	497	+9
Tarmac	1,700	117	+½
Tate & Lyle	331	476½	+3½
Tesco†	3,200	495	+13
Thames Water†	838	926	+18½
Tomkins†	2,400	309	+4
Unigate	153	577	
Unilever†	3,800	477	+10
United Assurance	256	518	+5½
United Biscuits	391	211½	+½
Utd. News & Media†	2,500	757	+4
United Utilities†	1,500	775	+4
Vendome	353	469	-3½
Vodafone†	9,800	387½	-10½
WPP	1,000	264	-1½
Wessex Water	118	484	
Whitbread†	807	850	-5
Williams†	3,100	329¼	+9¼
Wolseley†	753	500	-15
Woolwich†	3,400	305½	-5½
Yorkshire Water	349	487½	+1½
Zeneca†	3,300	1505	-25

Based on trading volume for a selection of major securities yesterday until 4.30pm. † Indicates a FTSE 100 index constituent or reserve. All trades are rounded. Source: Extel, part of FT Information.

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Highs & Lows shown on a 52 week basis

WORLD STOCK MARKETS

EUROPE

AUSTRIA (Dec 2 / Sch)

BELGIUM/LUXEMBOURG (Dec 2 / Frs.)

CZECH REP (Dec 2 / Koruna)

DENMARK (Dec 2 / Kr)

FINLAND (Dec 2 / Mkk)

FRANCE (Dec 2 / Frs.)

GERMANY (Dec 2 / Dm.)

GREECE (Dec 2 / Drachma)

ITALY (Dec 2 / Lira)

NETHERLANDS (Dec 2 / Fls.)

NORWAY (Dec 2 / Kroner)

POLAND (Dec 2 / Zloty)

PORTUGAL (Dec 2 / Escudo)

SPAIN (Dec 2 / Pts.)

SWEDEN (Dec 2 / Kronor)

SWITZERLAND (Dec 2 / Frs.)

TURKEY (Dec 2 / Tk Lira)

PACIFIC

JAPAN (Dec 2 / Yen)

HONG KONG (Dec 2 / H.K.$)

INDONESIA (Dec 2 / Rupiah)

MALAYSIA (Dec 2 / MYR)

NEW ZEALAND (Dec 2 / NZ $)

SINGAPORE (Dec 2 / S$)

AUSTRALIA (Dec 2 / Aus$)

SOUTH KOREA (Dec 2 / Won)

TAIWAN (Dec 2 / TW $)

THAILAND (Dec 2 / Baht)

AFRICA

SOUTH AFRICA (Dec 2 / Rand)

NORTH AMERICA

CANADA

TORONTO (Dec 2 / Can $)

4 pm close

MONTREAL (Dec 2 / Can $)

4 pm close

Emerging markets: IFC Investable Indices

Dollar terms

FT/S&P ACTUARIES WORLD INDICES

The FT/S&P Actuaries World Indices are owned by FTSE International Limited, Goldman, Sachs & Co. and Standard & Poor's. The Indices are compiled by FTSE International and Standard & Poor's in conjunction with the Faculty of Actuaries and the Institute of Actuaries. NatWest Securities Ltd. was a co-founder of the Indices.

NATIONAL AND REGIONAL MARKETS	MONDAY DECEMBER 1 1997								FRIDAY NOVEMBER 28 1997					DOLLAR INDEX		
Figures in parentheses show number of lines of stock	US Dollar Index	Day's Change %	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	Local %-chg on day	Gross Div. Yield	US Dollar Index	Pound Sterling Index	Yen Index	DM Index	Local Currency Index	52 week High	52 week Low	Year ago (approx)
Australia (75)	199.32	1.5	175.44	162.87	184.18	195.54	2.4	3.85	196.37	172.79	158.42	180.07	190.88	243.87	190.41	223.91
Austria (21)	184.18	1.4	162.11	150.50	170.19	170.11	2.2	1.97	181.61	159.80	146.51	166.54	166.48	213.59	175.14	185.94
Belgium (27)	252.57	1.4	222.31	206.38	233.38	228.96	2.2	3.02	249.08	219.15	200.92	228.39	223.51	261.11	221.31	226.42
Brazil (30)	225.79	2.1	198.74	184.50	208.64	480.95	2.0	1.62	221.22	194.65	178.46	202.86	451.70	322.44	178.98	179.94
Canada (122)	211.44	2.1	186.11	172.77	185.38	218.00	2.2	1.81	206.98	182.12	168.98	189.81	213.35	233.66	178.27	196.15
Denmark (32)	418.41	0.6	368.29	341.90	386.63	385.05	1.4	1.33	415.82	365.88	335.46	381.32	379.73	429.76	333.94	338.89
Finland (28)	299.80	0.8	263.88	244.97	277.03	338.24	1.7	1.84	297.34	261.63	239.88	272.67	332.67	349.43	232.86	236.01
France (84)	234.22	1.1	206.16	191.38	216.43	218.52	1.9	2.44	231.83	203.81	186.86	212.41	214.50	248.23	203.73	212.37
Germany (58)	223.66	2.0	196.88	182.77	206.69	206.69	2.8	1.40	219.21	192.89	178.84	201.02	201.02	243.87	183.03	187.56
Hong Kong, China (66)	360.54	2.1	317.35	294.60	333.15	357.94	2.1	4.47	353.12	310.71	284.87	323.82	350.45	580.03	314.78	507.89
Indonesia (27)	93.81	-3.6	82.58	76.66	86.69	214.95	-1.3	3.13	97.29	85.61	78.49	89.22	217.71	254.90	93.81	220.02
Ireland (16)	382.20	0.7	336.41	312.30	353.17	366.42	1.6	2.69	379.62	334.03	306.25	348.12	360.88	394.88	310.26	321.14
Italy (53)	110.39	1.1	97.17	90.20	102.01	143.47	1.8	1.70	109.20	96.08	88.09	100.14	140.92	115.27	79.11	82.40
Japan (482)	103.05	0.6	90.70	84.20	95.22	84.20	1.9	0.94	102.48	90.17	82.67	93.98	82.87	141.12	95.91	139.44
Malaysia (107)	170.21	-4.2	149.82	139.09	157.28	233.88	-2.1	3.11	177.74	156.39	143.39	162.99	238.97	660.85	170.21	601.61
Mexico (27)	1713.49	3.5	1508.23	1400.14	1583.34	15321.92	3.1	1.59	1654.76	1456.04	1334.95	1517.46	14854.70	1901.98	1147.98	1187.33
Netherlands (19)	408.73	2.1	359.77	333.99	377.88	373.66	2.9	2.25	400.21	352.15	322.86	367.00	363.13	440.67	313.78	326.88
New Zealand (14)	79.60	-0.9	70.06	65.04	73.55	69.31	0.2	4.46	80.35	70.70	64.82	73.69	69.18	96.47	75.37	92.11
Norway (38)	322.37	-0.5	283.75	263.42	297.88	317.23	0.3	1.92	323.89	285.00	261.30	297.02	316.17	374.84	277.33	281.90
Philippines (22)	84.39	0.7	74.28	68.96	77.98	147.19	1.2	1.40	83.82	73.76	67.62	76.87	145.50	214.07	78.40	198.11
Singapore (42)	249.90	0.6	219.96	204.20	230.92	184.60	1.3	1.73	248.41	218.58	200.40	227.80	182.31	448.01	215.21	412.81
South Africa (43)	269.92	-0.4	237.59	220.56	249.42	286.93	-0.3	3.03	271.11	238.55	218.71	248.62	287.78	370.12	258.47	326.14
Spain (33)	270.47	2.2	238.07	221.01	249.93	307.91	3.0	2.19	264.58	232.81	213.45	242.63	298.81	277.33	198.92	200.06
Sweden (49)	490.63	1.3	431.86	400.91	453.36	567.10	2.4	1.83	484.48	426.30	390.84	444.28	553.76	538.94	402.43	414.61
Switzerland (32)	326.94	1.2	287.77	267.15	302.10	290.39	1.7	1.16	322.92	284.14	260.51	296.12	285.42	329.59	231.69	244.01
Thailand (33)	24.32	-2.7	21.41	19.87	22.47	38.58	-1.2	7.28	24.99	21.99	20.16	22.92	39.04	115.54	24.32	115.54
United Kingdom (215)	326.00	1.6	286.95	266.39	301.24	286.95	1.6	3.43	320.98	282.44	258.95	294.35	282.44	337.99	261.60	273.93
USA (642)	396.96	2.0	349.41	324.37	366.81	396.96	2.0	1.55	389.09	342.37	313.89	356.81	389.09	399.82	293.43	307.78
Americas (821)	360.18	2.0	317.04	294.32	332.83	303.97	2.0	1.57	352.98	310.59	284.76	323.69	297.89	365.75	268.24	281.50
Europe (705)	283.69	1.6	249.70	231.81	262.14	264.22	2.0	2.43	279.42	245.86	225.42	256.24	259.00	296.25	227.48	234.45
Nordic (147)	423.54	0.9	372.80	346.09	391.37	426.60	1.9	1.76	419.63	369.24	338.53	384.81	418.49	464.83	345.30	353.26
Pacific Basin (874)	113.11	0.6	99.56	92.42	104.51	92.92	1.8	1.60	112.38	98.89	90.66	103.06	91.28	158.99	107.50	157.76
Euro-Pacific (1579)	184.27	1.2	162.19	150.57	170.27	157.19	1.9	2.13	182.07	160.20	146.88	166.96	154.20	209.12	173.56	189.61
North America (764)	385.12	2.0	338.98	314.69	355.86	384.69	2.0	1.57	377.46	332.13	304.51	346.14	377.23	389.57	286.61	301.15
Europe Ex. UK (490)	254.61	1.5	224.11	208.05	235.27	245.14	2.3	1.85	250.83	220.71	202.35	230.02	239.72	267.07	202.83	208.44
Pacific Ex. Japan (392)	205.23	0.9	180.65	167.70	189.64	199.47	1.6	3.89	203.31	178.89	164.01	186.44	198.28	320.65	194.30	318.22
World Ex. US (1801)	187.93	1.3	165.42	153.57	173.66	163.78	1.9	2.12	185.59	163.30	149.72	170.19	160.67	212.89	176.94	191.78
World Ex. UK (2228)	248.52	1.7	218.75	203.07	229.64	225.45	2.0	1.84	244.46	215.10	197.21	224.18	220.98	262.69	211.16	223.94
World Ex. Japan (1961)	331.47	1.8	291.76	270.85	306.29	323.42	2.0	1.96	325.58	286.48	262.65	298.56	317.09	344.35	264.51	274.88
The World Index (2443)	255.12	1.6	224.56	208.47	235.74	231.12	2.0	1.83	250.98	220.84	202.47	230.15	228.64	268.47	216.61	228.23

★ FT Free Annual Reports Service

NEW YORK STOCK EXCHANGE PRICES

4 pm close December 2

1997 High	Low	Stock	Div	Yld %	P/E	Sls 100s	High	Low	Close Quote	Chng Prev. Close
- A -										
[illegible]										
- B -										
[illegible]										
- C -										
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- D -										
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- E -										
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- F -										
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- G -										
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- H -										
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- O -										
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- P - Q -										
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- R -										
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- S -										
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- T -										
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- U -										
[illegible]										
- V -										
[illegible]										
- W -										
[illegible]										
- X - Y - Z -										
[illegible]										

Price data supplied by Edec, part of FT organisation

Yearly highs and lows for NYSE reflect the period from Jan 1 1997 unless otherwise noted. Rates of dividend are annual disbursements based on the latest declaration. Sales figures are unofficial.
d-new yearly low. P/E price-earnings ratio. s-split. u-new yearly high. x-ex-dividend or ex-rights. yld-yield. z-sales in full.
‡ Dealings suspended.

NASDA

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GLOBAL EQUITY MARKETS

US INDICES

Dow Jones	Dec 1	Nov 28	Nov 27	1997 High	1997 Low	Since compilation High	Since compilation Low
Industrials	8013.11	7823.13	(c)	8259.31 (6/8)	6391.69 (11/4)	8259.31 (6/8/97)	41.22 (8/7/32)
Home Bonds	104.58	104.59	(c)	104.78 (20/11)	101.09 (14/4)	104.78 (20/11/97)	54.99 (1/10/81)
Transport	3281.79	3199.86	(c)	3369.27 (15/10)	2222.07 (2/1)	3369.27 (15/10/97)	13.23 (8/7/32)
Utilities	261.16	258.64	(c)	261.16 (1/12)	209.47 (25/4)	261.16 (1/12/97)	16.53 (8/7/32)

DJ Ind. Day's high 8048.92 (7872.88) Low 7923.62 (7788.08) (Theoretical¶)
Day's high 8016.10 (7853.22) Low 7826.12 (7794.78) (Actual¶)

Standard and Poors	Dec 1	Nov 28	Nov 27	1997 High	1997 Low	Since compilation High	Since compilation Low
Composite‡	974.77	955.40	(c)	983.12 (7/10)	737.01 (2/1)	983.12 (7/10/97)	4.40 (1/6/32)
Industrials¥	1132.41	1114.02	(c)	1146.82 (7/10)	865.42 (11/4)	1146.82 (7/10/97)	3.52 (30/6/32)
Financial¥	117.82	113.30	(c)	118.84 (7/10)	80.75 (2/1)	118.84 (7/10/97)	7.13 (4/8/74)
Others							
NYSE Comp.	507.73	499.10	(c)	514.21 (7/10)	389.47 (11/4)	514.21 (7/10/97)	4.64 (25/4/42)
Amex Comp	664.13	682.11	(c)	721.90 (7/10)	541.20 (28/4)	721.90 (7/10/97)	524.20 (16/7/96)
NASDAQ Cmp	1630.72	1600.55	(c)	1745.85 (9/10)	1201.00 (2/4)	1745.85 (9/10/97)	54.87 (3/10/74)
Russell 2000	434.16	429.92	(c)	465.21 (13/10)	335.85 (25/4)	465.21 (13/10/97)	123.36 (7/12/93)

■ RATIOS

	Nov 28	Nov 21	Nov 14	Year ago
Dow Jones Ind. Div. Yield	1.74	1.73	1.78	2.02
	Nov 19	Nov 12	Nov 5	Year ago
S & P Ind. Div. yield	1.50	1.56	1.50	1.81
S & P Ind. P/E ratio	25.38	24.36	25.26	23.30

US DATA

■ MARKET ACTIVITY

● Volume (million)	Dec 1	Nov 28	Nov 26
NYSE	596.590	189.080	487.750
Amex	30.974	10.297	26.192
NASDAQ	619.427	213.852	524.323

NYSE	Dec 1	Nov 28	Nov 26
Issues Traded	3,445	3,259	3,414
Rises	2,019	1,572	1,673
Falls	984	1,095	1,187
Unchanged	442	552	554
New Highs	298	125	132
New Lows	63	48	96

■ NYSE TRADING ACTIVITY — Volume : 596,590,000

■ ACTIVE STOCKS

Monday	Stocks traded	Close price	Day's change
Warn Lamb	8,681,900	113⅞	−25⅞
Compaq	6,754,400	66	+3⅛
Off Depot	5,636,000	22¼	−⅝
IBM	4,987,000	112⅜	+3
Schmbgr	4,975,200	78⅞	−4⅛
Gen Elect	4,713,000	74	+⅛
AT & T	3,814,400	57	+1⅛
Boeing	3,643,600	53⅞	+⅞
Ph Morris	3,583,200	44¼	+⅛
Travelers	3,450,200	54	−3⅛

■ BIGGEST MOVERS

Monday	Close price	Day's change	Day's chge %
Ups			
First Amer	72¼	+14	+23.8
Citicorp	129⅜	+9½	+7.9
BkAmerica	79⅞	+5⅞	+7.8
Dayton Hud	71⅞	+5⅛	+7.7
Downs			
Warn Lamb	113⅞	−25⅞	−18.5
Oceaneerng	17⅞	−2⅞	−13.8
Revpack RSC	17⅝	−2⅝	−12.9
Olsten Olin	45⅞	−4⅜	−8.4

■ NASDAQ TRADING ACTIVITY — Volume : 619,427,000

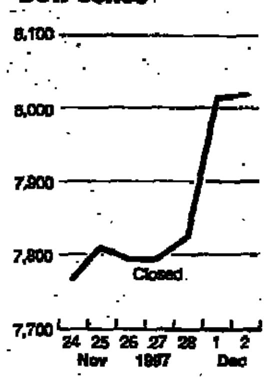
■ ACTIVE STOCKS

Monday	Stocks traded	Close price	Day's change
Intel Corp	17,178,000	81⅝	+3⅜
Appl Matrl	12,984,400	32⅛	−⅛
Oracle Cp	12,270,400	31⅝	−1⅛
3Com Corp	12,050,700	38¼	+2⅛
Dell Cmptr	10,905,700	90⅛	+5⅞
Cisco Sys	10,838,200	90⅛	+4⅛
Sun Micro	9,816,800	38⅞	+2⅛
Microsoft	8,094,500	143⅞	+2⅞
Xilinx	5,248,800	40⅛	+5⅞
Worldcom	4,901,100	32⅞	+⅛

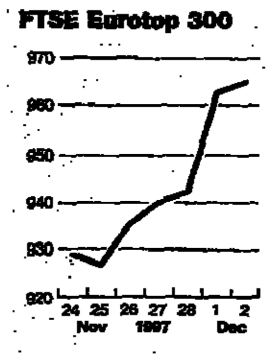
■ BIGGEST MOVERS

Monday	Close price	Day's change	Day's chge %
Ups			
Xilinx	40⅛	+5⅞	+17
Star Telcom	33⅜	+4⅞	+17
Magnetics	39⅜	+4⅞	+14
Mentor Am	52	+6⅛	+13.7
Downs			
Ordgene	10	−2	−16.7
Cell-Net B	19⅛	−2⅞	−13.7
Extended	13⅛	−2	−13.1
Mar Drilling	20⅜	−2⅛	−9.6

Dow Jones



FTSE Eurotop 300



JAPAN

	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Since compilation High	Since compilation Low
Nikkei 225	16910.29	17007.59	16636.28	20681.07	15082.52	38915.8	85.25

■ TOKYO TRADING ACTIVITY — Volume : 563,000,000

■ ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
Yamaichi Sec	47,822,000	2	
Yasuda T & B	34,478,000	136	−23
Daiwa Bank	34,318,000	315	+5
Ashikaga Bk	14,457,000	241	+23
Mitsui T & B	12,967,000	276	−4
Daiwa Secs	12,673,000	484	−1
Sakura Bank	9,495,000	463	−6
Tokyo Cty Bk	9,158,000	2	−1
Hokk Tak Bk	8,776,000	2	+1
Kankaku Sec	8,420,000	103	+12

■ BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
Yamatane Sc	110	+23	+26.4
Sanko Kisen	139	+20	+16.8
Sekisui Kgy	114	+15	+15.2
Renown Lk	186	+24	+14.8
Downs			
Kiyo Bank	270	−55	−16.9
Yasuda T & B	136	−23	−14.5
Sankyo	3550	−500	−12.4
Fujita Corp	51	−7	−12.1

FRANCE

	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Since compilation High	Since compilation Low
CAC 40	2913.08	2918.49	2859.19	3094.01	2256.97	3094.01	984.61

■ PARIS TRADING ACTIVITY — Volume : 347,931,470

■ ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
Paribas A	1,376,128	440	+1
Fr Telecom	1,367,488	217	−0.7
Usinor	1,362,536	98.3	+1.3
Axa-UAP	911,205	432.6	−0.9
AGF	868,586	334.7	−1.3
Elf Aquitn	821,042	664	−19
Cetelem	733,473	772	−2
Rhn-Plnc A	676,638	270.5	+2.6
Total B	592,462	619	−3
B.N.P.	493,778	290.8	−0.2

■ BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
Prodith	23.3	+3.3	+16.5
Finalens	294	+36.5	+14.2
Skis Rossgnl	116	+10.7	+10.2
Bailcal Scm	100.2	+9.2	+10.1
Downs			
De Lamothe	325.2	−94.8	−22.6
Ducros Srv	45	−8	−15.1
Arjomari	1486	−164	−9.9
C. Engrpge	278.2	−29.7	−9.7

GERMANY

	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Since compilation High	Since compilation Low
DAX	4072.95	4068.05	3948.14	4438.93	2848.77	4438.93	931.18

■ FRANKFURT TRADING ACTIVITY — Volume : 17,782,341

■ ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
BASF	618,187	64.5	−0.3
Dt Telekom	520,989	36.9	
Deutsche Bk	508,705	115	+0.1
Siemens	506,437	107.95	+1.15
Lfthnsa Rg	488,234	34.95	−0.15
Veba	449,289	107.3	
Commrzbnk	428,063	61.7	−0.55
Bayer	407,025	68.65	+0.25
Dmlr-Benz	385,633	129	+1.3
Hoechst	349,525	63.2	−0.45

■ BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
DL Babcock	97.35	+6.35	+7
Ava Cel Kolsn	158	+10	+6.8
Villeroy	275	+15	+5.8
Tarkett	39	+2	+5.4
Downs			
Kronos	589	−31	−5.2
Mn. Tbeding	940	−50	−5.1
Bsldka-Dvr	245	−13	−5
Nrdle Kletn	23.60	−1.2	−4.8

UK

	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Since compilation High	Since compilation Low
FTSE 100	4877.5	4921.8	4831.8	5330.80	4056.60	5330.8	986.5

■ LONDON TRADING ACTIVITY — Volume : 599,000,000

■ ACTIVE STOCKS

Tuesday	Stocks traded	Close price	Day's change
ASDA	22,478,570	164½	+5
Shell T&T	22,095,080	421	+9½
Natl Grid	17,648,220	300	−2
Centrica	16,337,540	91½	+2
Lloyds TSB	15,158,070	718	+34
BT	13,335,070	468¼	+3¼
Safeway	9,759,683	323½	+1¼
Vodafone	9,594,855	397½	−10½
BTR	9,422,489	208	
Brit Steel	8,843,602	141½	+1¼

■ BIGGEST MOVERS

Tuesday	Close price	Day's change	Day's chge %
Ups			
Chieftain	75	+17½	+30.4
Marydown	65½	+15	+29.7
Arcolectric	73½	+13½	+22.5
GET Grp	73½	+9	+13.9
Downs			
Leslie Wise	19	−5	−20.8
Coliseum	16½	−3½	−17.5
Brunschffe	26	−4½	−14.7
Alliance Re	28	−3½	−11.9

INDEX FUTURES

■ S&P 500	Open	Latest	Change	High	Low	Est. vol.	Open int.
Dec	979.00	976.00	−3.60	981.80	974.50	112,821	361,131
Mar	989.20	989.30	−1.00	989.30	985.40	15,773	39,221
■ Nikkei 225	**Open**	**Sett price**	**Change**	**High**	**Low**	**Est. vol.**	**Open int.**
Dec	16940.0	16900.0	−100.0	17110.0	16860.0	25,450	158,979
Mar	16970.0	16920.0	−100.0	17100.0	16880.0	8,415	42,833

Open interest figures for previous day.

■ CAC-40 (200 x index)	Open	Sett Price	Change	High	Low	Est. vol.	Open int.
Dec	2927.0	2920.0	−7.0	2935.0	2899.0	14,359	44,477
Jan	2935.0	2927.0	−7.0	2935.0	2920.5	146	4,700
■ DAX							
Dec	4132.0	4100.0	−30.0	4140.0	4077.0	20,773	72,434
Mar	4169.0	4136.5	−30.0	4172.0	4115.5	811	10,012

■ OMX	Open	Sett Price	Change	High	Low	Est. vol.	Open int.
Dec	2507.0	2488.0	−12.0	2517.0	2487.0	6,986	25,354
Jan	2506.0	2498.0	−3.5	2527.0	2498.0	480	499
■ SOFFEX							
Dec	5880.0	5926.0	+35.9	5934.4	5867.0	4,658	19,851
Jan	5897.0	5934.0	+7.0	5908.0	5897.0	68	1,779

WORLD MARKETS AT A GLANCE

Country	Index	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Yield	P/E
Argentina	General	22289.75	22249.66	21846.94	25771.78 22/10	18232.37 2/1	3.41	18.2
Australia	All Ordinaries	2524.8	2513.4	2485.1	2779.20 25/9	2289.20 28/10	3.7	17.8
	All Mining	563.6	560.3	547.9	987.10 24/2	541.10 27/11		

News Corp shares slid after recent sharp gains. There was speculation that WorldCom may dispose of its 9 per cent stake.

Country	Index	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Yield	P/E
Hungary	Bux	6912.08	6806.67	6652.84	8483.89 6/8	4291.30 6/1	na	na

Market was the main feature, climbing more than 4 per cent on renewed institutional interest.

Country	Index	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Yield	P/E
India	BSE Sens.	3553.48	3569.63	3560.29	4548.02 5/8	3225.24 2/1		
	Crisil 500	654.99	657.48	658.63	843.28 5/8	622.71 2/1	na	na

Shares lacked direction amid continuing political uncertainty, but software stocks made gains on a weaker rupee.

Country	Index	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Yield	P/E
Poland	WIG	14872.2	14411.6	14322.6	18339.40 18/2	14223.70 25/11	1.81	10.4

Shares rose for the third successive session, helped by reports that the 1997 budget deficit would be less than expected.

Country	Index	Dec 2	Dec 1	Nov 28	1997 High	1997 Low	Yield	P/E
Portugal	BVL 30	3659.03	(c)	3576.82	3886.81 3/10	2185.57 2/1	1.75	25
	PSI 20	8509.01	(c)	8309.21	8603.92 3/10	5152.34 2/1		

Shares made an impressive start as Lisbon joined the MSCI index of developed markets.

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NASDAQ NATIONAL MARKET

4 pm close December 2

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NASDAQ NATIONAL MARKET

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AMEX PRICES

4 pm close December 2

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EASDAQ

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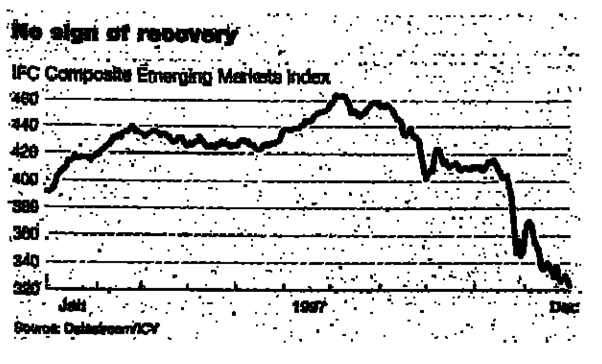
Rise on Wall Street sets a positive tone

WORLD OVERVIEW



World markets mostly held on to their recent gains, with investors seemingly determined to enjoy a traditional pre-Christmas rally, *writes Philip Coggan.*

Monday's strong performance on Wall Street, where the Dow Jones Industrial Average regained the 8,000 level, set a positive tone for the day, and Hong Kong duly responded with a 4.3 per cent gain.

But the Tokyo rally stalled and the Korean market edged lower again, as investors awaited agreement on an International Monetary Fund bailout.

The European markets were mixed, with the CAC 40 and Dax losing ground, as the dollar slipped back against the D-Mark and yen. The yen hit a 5½-year low against the dollar on Monday. However, the Dutch and Swiss markets were higher and the FTSE Eurotop 100 index gained seven points, or 0.3 per cent.

The market turmoil in response to Asia's financial problems seems to have quietened but few are predicting an imminent end to the crisis.

Geoffrey Dennis, chief emerging markets strategist at HSBC James Capel, says: "Clearly, the problems in the emerging markets as a whole are not over. Any rally will be slow and erratic with Asian markets barely taking part at first.

"The markets are likely to continue to be buffeted by shocks, mainly related – as over the past five months – to currency developments."

However, Mr Dennis does see some positive factors. "Although high interest rates in many emerging markets are a constraint on an early recovery (equities are very expensive relative to cash), emerging market equities now look extremely cheap relative to earnings."

In the rest of the world, analysts are grappling with the effect of the Asian crisis on corporate earnings. "We continue to revise our portfolio in response to evolving events in Asia," says the European team at Goldman Sachs.

"While we have not made any further cuts in our earnings estimates, there is a significant likelihood that this could occur.

"The defensive tilt that we have put into our portfolio reflects our view that any company doing business in Asia or facing competition from Asian producers is vulnerable to a flow of negative news from that area."

Goldman has cut its recommended weighting in Germany and raised it in Italy.

"The prospect of the Italian tax reform proposals being passed and the increasing attractiveness of a market which is dominated by companies whose earnings are largely sourced out of the domestic Italian and European economies, has reduced the risks in Italy despite our view that the market is fully valued."

Tech stocks stumble over earnings fears

AMERICAS

US stocks failed to follow up Monday's explosive rally as technology stocks stumbled on concerns about future earnings, *writes John Labate.*

By mid-afternoon, the Dow Jones Industrial Average was up 2.74 to 8,015.85, while the broader Standard & Poor's 500 index slid 2.71 at 972.07. Most of the action was focused on the computer sector, with the Nasdaq composite index falling 17.54 or 1.08 per cent to 1,613.18.

Small stocks were also weaker as the Russell 2000 index of small company shares lost less than one point at 433.39.

"The market usually doesn't follow a big day with large rises or falls, so this is not unusual," said Stephen Shobin, technical analyst at Lehman Brothers. Monday's rally was led by the blue-chip sector, as the Dow gained more than 180 points, a rise of 2.4 per cent.

Trading was far more mixed on Tuesday, led by a sharp sell-off in the technology sector. Cabletron, the computer networking company, plunged more than 29 per cent or 6\frac{13}{16}$ to $16⅞ after the company warned that nine-month earnings would fall below expectations – the third successive quarter that they have done so.

In the semiconductor sector, shares in Altera tumbled 22 per cent or 11$\frac{13}{16}$ to $40 after Morgan Stanley cut its rating. Most of the chip sector was down, and the Philadelphia Stock Exchange's index of semiconductor shares plunged nearly 6 per cent to 287.13.

Xilinx also came under pricing pressure and its shares fell 4\frac{7}{16}$ or more than 10 per cent to $36⅛.

After Monday's rally the banking sector was more evenly traded yesterday but merger speculation continued to move mid-sized banking shares. KeyCorp rose $\frac{15}{16}$ to 70\frac{13}{16}$ while PNC gained $⅞ to $57¾ after both shares were put on the "buy" list by Brown Brothers. Among larger banks, Chase Manhattan was down $$\frac{15}{16}$ to 114\frac{1}{16}$.

In the Dow, Coca-Cola rose $1¼ to 65\frac{11}{16}$ after an analyst recommended the stock as a "long-term buy".

Ford Motor's shares rose $⅝ to $45 on news that the carmaker had launched a joint venture to make vehicles for the Chinese market

TORONTO continued to rally on the back of a strong run for the banking sector. The 300 composite index was up 67.33 at 6,691.20 at noon.

Banks stayed firmly on the buy side, making up for a dull performance recently and benefiting from vague talk of a possible cut for Canadian interest rates.

By midsession, Bank of Montreal had put on C$1.45 at C$65.30 and Royal Bank of Canada C$1.95 at C$80.80. Toronto Dominion Bank was 90 cents ahead at C$53.65.

BCE gained 90 cents to C$44.90 and Northern Telecom put on 50 cents to C$137.00. Alcan Aluminium was up 55 cents at C$39.55. Drinks and entertainments leader Seagram rose 45 cents to C$46.45.

Golds were mixed in spite of the generally better showing for the bullion price.

São Paulo climbs 2.4%

Latin American centres pushed higher with sentiment boosted by the more stable showing in Asian markets and the uptrend in Brazil which continued to build on Monday's gains.

SAO PAULO moved ahead strongly in good volume following a positive broker note on index heavyweight, Telebrás. HSBC James Capel reaffirmed its buy rating on the telecoms leader after discussing third-quarter results with company officials.

Telebrás rose 2.9 per cent to R$121.30, a performance largely instrumental in sending the Bovespa index up by 232 or 2.4 per cent to 9,881 at midsession.

MEXICO CITY was 4.85 higher at 5,123.01 on the IPC index at midsession. Volume was thin but brokers said banks had been relatively active after HSBC James Capel initiated coverage of the sector with a number of long-term buy ratings.

"The Asian-driven sell-off has made bank shares look cheap," HSBC said. Banacci gained 16 centavos to 19.52 pesos.

Frankfurt holds above 4,000

EUROPE

Shares in **FRANKFURT** failed to build on Monday's gains but still finished well above the psychologically important 4,000 level.

With institutions reluctant to buy shares aggressively ahead of the year-end and without a clear lead from Wall Street, the Xetra Dax index closed 29.52 lower at 4,096.4.

Corporate news was the main feature in a lacklustre market. Chemicals leader Degussa was a weak performer, losing DM2.10 to DM82.70 after poorly received annual results. Although earnings per share met analysts' expectations, dealers said pre-tax profits had come in lower than anticipated.

Troubled engineering group Deutsche Babcock was boosted by news that it had cut its annual loss and increased sales. The shares closed DM6.35 higher at DM87.35.

Carmakers rose after an upbeat survey from the Ifo business research institute, which said annual car production should grow by 7.5 per cent this year, up from 4.7 per cent in 1996. Ifo also said it saw few signs of a slowdown.

BMW rose DM15 to DM1,392, Daimler Benz DM1.30 to DM129 and Volkswagen DM17 to DM1,049.

PARIS ended little changed after a day of narrow, uncertain trading. The dollar lost some of its recent buoyancy and Wall Street's slack start did nothing to cheer traders in the final stages of the session. The CAC-40 finished off 5.39 at 2,913.09.

Accor continued to benefit from takeover talk, although it was not clear from the rumours whether the hotels giant was seen as a predator or a victim. The shares rose FFr26.00 to FFr1,154.

The recent good run for selected retailers spilled over into Promodes, which rose FFr53 to FFr2,265. But Pinault-Printemps ran into profit-taking, dipping FFr2 to FFr3,110.

Oils remained troubled in spite of a steadier day for oil prices. Elf Aquitaine shed FFr19 to FFr664. Among smaller caps, Ski Rossignol gained FFr10.70 or 10.2 per cent to FFr116 on takeover rumours.

AMSTERDAM traded narrowly. Paper leader KNP BT was the day's best performer, adding Fl 1.50 or 3.5 per cent to Fl 44.90. Pubisher VNU was also a strong feature, gaining Fl 1.30 to Fl 49.70 on the back of a broker's buy recommendation.

Among financials, ING reversed a period of dull trading with a gain of Fl 2.00 to Fl 84.10. Fortis Amev added 80 cents to Fl 85.80 in spite of a downgrade from "buy" to "neutral" by ABN Amro Hoare Govett. Talk of airline mergers got behind KLM, up Fl 1.40 to Fl 74.90.

The overnight bounce for US tech stocks lifted ASM Lithography, which ended Fl 5.00 higher at Fl 134.50. Baan gained Fl 3.50 to Fl 150. At the close, the AEX index was up 3.61 at 913.70.

BUDAPEST closed higher, helped by another strong performance from telecommunications utility Matav. The Bux index finished 105.41 better at 6,912.08.

Matav was again the most heavily traded stock as institutional investors continued to pick up shares following its privatisation offering last month. The shares ended the day Ft34 higher at Ft880.

MILAN continued to be dominated by hopes of an interest rate cut as dealers speculated that the Bank of Italy would act by the end of the month.

But after trading most of the day in a narrow range, shares eased towards the close on an uninspiring Wall Street, and the Mibtel index ended 20 lower at 15,592.

Pirelli rose L44 to L4,640 as the stock continued to benefit from market approval on the back of its deal, announced on Monday, to acquire cable-layer Sirti.

Fiat rose in spite of recent negative comments from brokers. Helped by a market view that the stock was oversold on Latin American worries last month, the shares climbed L12 to L5,170.

Oil stocks continued to be a weak market, with drilling company Saipem among the market's biggest fallers, losing L389 to L9,448 after parent Eni said it planned to reduce its 66 per cent stake. Eni dropped L119 to L10,029.

ZURICH saw late buying and the SMI index ended 44.8 higher at 5,919.9. ABB rose SFr14.00 to SFr1,936 after Salomon Smith Barney reaffirmed its outperform rating on the shares.

Holderbank added SFr22 to SFr1,279 on news of the bid for the outstanding minority interest in Swiss cement producer Portland-Cementwerk.

COPENHAGEN was a dull market apart from shares in biotechnology leader Novo Nordisk, which closed DKr34.50 higher at DKr885, boosted by news of a licensing deal with Sanofi of France for its anti-epilepsy drug Gabitril. The KFX index rose 1.6 to 195.3.

ISTANBUL rallied following news of government plans to freeze public sector prices for the first half of 1998. The IMKB National 100 index closed 109 or 3.9 per cent higher at 2,923 in trading volume 75 per cent up on Monday's depressed levels.

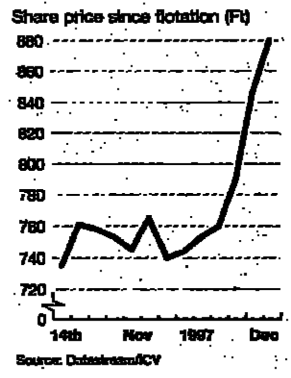
Written and edited by Jeffrey Brown, Jonathan Ford and Peter Hall.

FTSE Actuaries Share Indices — European series

December 2

National & Regional Markets	Ecu Index	Day's %	change points	Yield gross %	xd adj	Total return (Ecu)
FTSE Eurotop 300	985.20	+0.25	+2.40	2.34	0.00	971.86
FTSE Eurotop 100	2232.75	+0.31	+6.99	–	–	–
FTSE Eurotop 300 Regions						
300 UK	972.92	+0.85	+8.31	3.28	0.00	987.41
300 Ex-UK	981.43	+0.02	+0.18	1.80	0.00	963.69
300 Eurobloc	948.50	–0.16	–1.51	2.01	0.09	951.82
300 Ex-Eurobloc	977.97	+0.53	+5.20	2.57	0.00	987.09
FTSE Eurotop 300 Economic Groups						
Resources	922.07	+0.20	+1.83	2.98	0.00	934.90
General Industries	929.69	–0.35	–3.23	2.11	0.00	931.80
Consumer Goods	959.61	+0.26	+2.50	1.92	0.00	969.90
Services	992.85	+0.45	+4.47	2.28	0.00	999.64
Utilities	1006.72	+0.08	+0.80	2.99	0.00	1014.32
Financials	983.94	+0.66	+6.42	2.35	0.00	986.60

Base value 1000. More information on http://www.ftse.com. 'FTSE' and 'Footsie' are registered trade marks of the London Stock Exchange and The Financial Times. 'Eurotop' is a registered trade mark of the Amsterdam Stock Exchange. FTSE Eurotop Indices are compiled by FTSE International. © FTSE International Limited 1997 All rights reserved.



SOUTH AFRICA

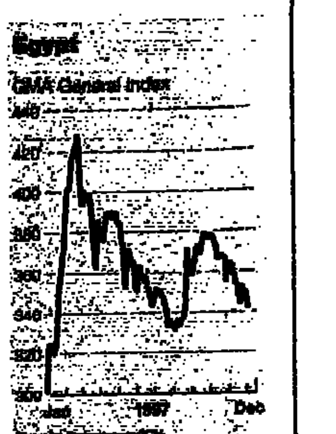
Shares in Johannesburg ended higher but off the best of the day after a dull session for industrials undermined a modest rally for golds.

At the close, the all-share index was up 17.1 at 6,841.6. Industrials shed 15.4 at 7,741.2, but golds edged higher as the bullion priced bounced off its low for the session.

The golds index ended 5.5 better at 714.8.

EMERGING MARKET FOCUS

Massacre fails to ruffle Cairo



The Egyptian stock market has proved relatively resilient in spite of anxiety over national security following the killing of 58 tourists by Islamist extremists in the Nile resort of Luxor on November 17.

Trade on the Cairo Stock Exchange immediately before the attack had already slowed considerably. Over the first two weeks of November, the Capital Market Authority index had eased by more than 2 per cent or 8 points to 355.

Investor reaction immediately after the outrage, which has caused a 90 per cent fall in tourist arrivals, was understandably defensive. But brokers report little real weight of selling.

Yesterday, the CMA index ended off 3.85 at 342.54. This compares with a high for the year of 427.77. The Egyptian pound had a better day against the dollar, but trading volume yesterday was weak.

Analysts see the undramatic market trend as partly a reflection of two factors.

First, very few tourist-based shares are listed on the Cairo exchange. Second, a number of long-awaited privatisation issues have been very slow in coming forward.

To some extent portfolio cash balances built up to absorb the expected flow of new issues have had to find their way back into the market.

"The lack of new issues has been a clear support," commented one local broker.

Only Misr Hotels, the majority stakeholder in the Nile Hilton as well as other hotels and a 73 per cent state-owned tourist-related company, is quoted on the Cairo Stock Exchange.

Its closing share price on the day before the attack was E£158. The shares currently stand at E£134.33, a decline of more than 16 per cent.

On November 26, the state holding company for Housing, Tourism and Cinema, which controls 50 per cent of Misr Hotels, announced that it would pursue plans for the privatisation of its 65 hotels, which had been delayed earlier this year.

The sales will provide the most significant signal of Egypt's ability to recover from the debacle of the Luxor attack. Assets valued at E£7bn ($2.06bn) will be sold as minority sales in 11 categories.

Egypt's major tourist investments are either foreign-owned hotel chains or private sector developments largely backed by private Egyptian companies whose shares are not traded on the Cairo Stock Exchange.

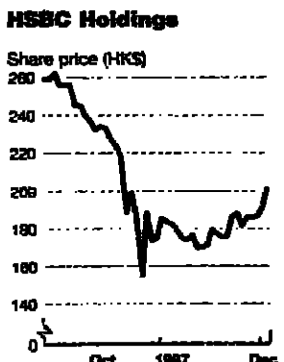
The bruising affect of the current collapse in tourism is likely to be felt most acutely by the companies and the banks and financial backers of the country's most ambitious developments, many of which have taken equity stakes in hotels.

In London, Egyptian global depository receipts have largely retained their value, giving potential support to Cairo trade where the price of shares in Al Ahram Beverages have been offered at a discount to the London price.

Mark Huband

Hong Kong shoots ahead 4%

ASIA PACIFIC



Buyers turned out in force in **HONG KONG**, lifting turnover to nearly HK$14bn and sending the Hang Seng index shooting ahead by 465.47 or 4.3 per cent to 11,216.35.

The index has risen more than 6 per cent in three session. Turnover yesterday was 2.5 times Monday's levels. "The perception of stability returning to Asian stock markets is now with us," said one broker.

Sentiment was boosted by easier local inter-bank rates plus Wall Street's strong overnight gains. HSBC rose HK$10.50 or 5.5 per cent to HK$201.00. Sun Hung Kai added HS1.50 at HK$61.50.

China stocks surged, with red chips reversing eight straight days of decline with a 9 per cent bounce for the index. The H shares index rose 4.7 per cent.

TOKYO fell slightly, bringing the Nikkei 225 back under 17,000. The index closed at 16,910, down 97.30, *writes Gillian Tett.* The decline followed four consecutive daily rises, driven partly by hopes that the government was moving to use public money to address financial sector problems.

However, traders yesterday pointed out that firm details about any injection of public funds were unlikely to emerge for several days. And with Japan's gross domestic product figures for the third quarter of 1997 due to be released today, traders are nervous of taking strong positions, analysts said.

The data are regarded as particularly important, because they will show whether the economy rebounded after a sharp dip in activity over the summer. The government has blamed this dip on the April consumption tax rise. But if the slump continues into the third quarter, it might highlight longer-term structural problems.

Turnover was 563m shares, largely unchanged from Monday's volume of 553m. Winners led losers 566 to 556. Pharmaceuticals were the biggest loser, driven down by news on Monday that an UK pharmaceutical group was withdrawing a diabetes drug. Banks were the second largest losers. Yasuda Trust was the second most heavily traded issue, falling Y23 to Y136.

Blue-chip companies like Sony, however, continued to benefit from investors seeking groups with strong earnings records. The company rose Y300 to Y11,500.

SEOUL hit a 10-year low amid rising concerns about the likely toughness of the IMF's rescue package.

Analysts said news that the finance ministry had suspended business at nine merchant banks yesterday hit sentiment as it was the clearest signal yet that the IMF plans a painful restructuring of Korea's banking system. Down 6 per cent at one stage, the composite index closed 16.29, or 4.1 per cent lower at 376.97.

Banks dominated trading, with stronger institutions rising on hopes that they will escape closures.

TAIWAN ended nearly 4 per cent higher as investors shrugged off the political concerns that dragged the market lower on Monday.

The rebound almost wiped out Monday's 5 per cent fall which was triggered by the ruling Nationalist party's unexpected defeat in local elections at the weekend.

All sectors benefitted from the rise, with the plastics sector gaining 6.6 per cent and electronics stocks 4.4 per cent. The weighted index rose 278.89 to 7,679.53.

BANGKOK fell on worries about the financial sectors as money rates continued to harden in defence of the baht. The SET index fell 9.42 or 2.4 per cent to 378.14. The banks sector tumbled 5.7 per cent with Bangkok Bank falling Bt7.50 to Bt82 and Thai Farmers Bt3.00 to Bt70.

KUALA LUMPUR rebounded from early lows after bargain-hunters selectively bought blue chips, helping the composite index to end 8.5 higher at 536.95.

Information Technology

Wednesday **December 3** 1997

The home of the future may well present a golden opportunity to the information, communications and digital entertainment industries, reports **Geoffrey Nairn**

Cyberhome will open the way for big new markets

The home of the future has inspired generations of sci-fi writers and designers who, freed from the limitations of today's technologies, can let their imaginations play. Now the IT industry has also started to dream, but its vision of the future owes little to utopian fantasies and is instead driven by the commercial potential that digital consumer products could one day represent.

In 2000, the average new house may contain more than 50 micro-controllers – the chips that make microwave ovens or central heating programmable – while home automation software and in-home networks will allow domestic appliances to be linked and controlled by computer.

Digital technology is also poised to invade the living room. The digital compact disk has made records and cassettes largely obsolete and the new digital video disk (DVD) standard threatens to do the same for the video cassette. Radio and television sets will be the next products to succumb to digitalisation. Pilot digital radio broadcasts have started in some countries and digital TV is not far behind.

These developments could herald a boom for the electronics industry as consumers rush to replace their analogue radios, tape players and TVs with digital systems or buy new products such as information appliances.

The IT industry wants to share in this digital boom but its past track record at tapping the consumer market has been modest at best. "The PC has had some success in the consumer market," says Inteco, a UK-based consultancy. "However, this has only been possible because people have extensive experience of its benefits in the workplace."

In the US, about 40 per cent of homes have a personal computer while in Europe the figure is around 20 per cent. Inteco's research shows that of those people do not use a PC at work, less then 20 per cent have a computer at home.

For a PC to succeed in the home as a stand-alone consumer product, rather than a surrogate office system, analysts believe several issues must be addressed. "PCs are relatively expensive devices compared to the average consumer spend on leisure activities," says Ovum, a UK-based consultancy. "They are complex devices, notoriously difficult to configure and manage, and have an interface which requires some effort to use effectively."

The leading PC vendors have recently launched consumer models priced below $1,000, which is seen as a psychological barrier for US consumers. For example, IBM's Aptiva E16 PC, launched last month, has a price without monitor of $999 and includes a 166MHz multimedia processor, high-speed CD-Rom and fast modem.

Compaq is also chasing the consumer with cheaper, simpler-to-use PCs. It predicts the consumer market could be worth 25 to 30m PCs in 2000. However, it also recognises the PC may need a more radical redesign if it is find room in the digital home of the future.

PCs and PC-related technologies "are just too complex and imposing for many customers to operate", says Eckhard Pfeiffer, Compaq chief executive officer, speaking at the Comdex trade fair in Las Vegas last month. "For the market to continue to grow at a rapid rate, the PC must become a lot more appliance-like."

The digital home of the future will contain an array of devices, all generically related to the PC and many with focused and specialised services, Mr Pfeiffer predicts. "Sure, there will be a general purpose PC – say, in the study – and some will sell for as little as $500. But in the living room there will be a large-screen, simple-to-use digital device for watching movies or cruising the Internet."

The WebTV set-top box, developed by WebTV Networks, now a Microsoft subsidiary, was an early attempt at such a product, but it got a mixed reception from consumers. Some criticised the delay when switching from surfing the web to watching TV; others struggled to read web pages on their TV – picture quality is inferior to a PC monitor.

"Web TV has not been robust enough technologically but the potential for this product in enormous," says William Burke, vice president of consumer products with Batelle, a US forecasting centre. Compaq's Mr Pfeiffer believes WebTV was handicapped by the limitations of today's TV rather than any fundamental problems with the concept.

To demonstrate the point, he slumped down in an armchair on the Comdex stage and began to watch TV on the latest Compaq product: the PC Theatre 9100. This 36-inch TV incorporates a PC, wireless keyboard, modem and a DVD player. Having seen enough TV, Mr Pfeiffer 'hit the remote' and instantly switched to surfing the web. "With a product like this some people will not want to get off their couch again," he says.

However, the PC Theatre 9100 costs more than $5,000 – and similar "home theatre" PC TV products from Gateway and Philips are also priced beyond the pocket of most consumers. Besides, a product that combines a PC and a TV is hardly revolutionary. Far more risky is inventing radically new mass-market products to fill tomorrow's cyberhome.

For some years, Philips has run a project that gives free rein to its designers to dream up products consumers could be using in 10 years' time. Their latest ideas – visible at web site www-eu.philips.com/design – assume technology will become less obtrusive by being integrated into walls and furniture, for example. The only exposed objects will be the control interfaces which could become more iconic and sculptural. The designers' mockups are visually daring and include ideas such as "living wallpaper", which uses flat screen technology to handle sound and vision, and the "heart" – a device to control entertainment and information services in a living room using a touch-screen display or a small personal remote control called a "wand". The kitchen, meanwhile, could contain a "virtual chef" and an "intelligent garbage can".

Compaq's Mr Pfeiffer also has plans for the kitchen. He envisages a wall-mounted kitchen appliance to handle e-mail, video conferencing and electronic commerce over the Internet. His other ideas include a device like a cellular phone to handle electronic mail, faxes and get information from the Web – Nokia's Communicator is clearly the inspiration here – and a wireless video-conferencing system.

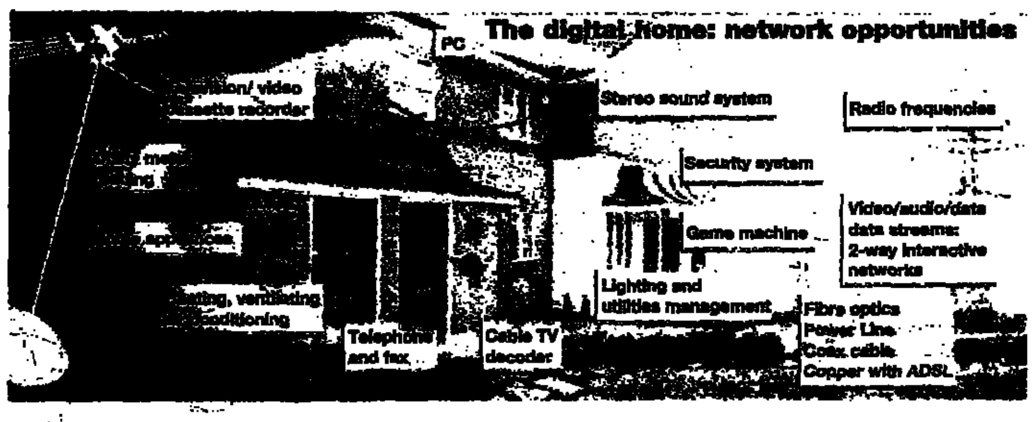
Others in the IT industry share Mr Pfeiffer's vision of the home full of low-cost information appliances. But they differ widely on the technologies that will be needed to make the vision a reality. Mr Pfeiffer favours PC-based technologies and envisages a big Compaq server sitting in the garage that connects home PCs and PC-based appliances together using a wireless or twisted-pair network.

Critics say the PC industry does not really understand this new market, and its products will frustrate rather than excite consumers. An example is Microsoft's Windows CE operating system, supposedly designed specifically for consumer products.

Many of those who earlier this year bought palmtop computers based on Windows CE have found they now must pay for an upgrade if they want the extra functions in the latest release of Windows CE.

"The industry has been on the upgrade treadmill for many years but this will not be tolerated by consumers," says Ed Iacobucci, chairman and founder of US networking company Citrix. "The digital appliance should be fixed so that the consumer never has to get more software."

The best-known example of an easy-to-use information appliance is the network computer, which works off a distant server. Oracle has mostly emphasised the NC's role in corporate computing, but it also sees NCs scoring with consumers who want to surf the Internet. Mauro Righetti, who heads European operations for Oracle subsidiary NCI, claims the first NC-based set-top boxes aimed at the consumer market should appear by mid-1998.



Yet, despite the IT industry's interest in promoting Internet access in the home, analysts point out that surfing the web is today a minority activity. "Even in the US, most home PC owners have never subscribed to an online or Internet access," says Inteco in a report on network computers.

"The principal barrier appears to be the lack of consumer motivation – not the hardware cost."

Inteco concludes it is unlikely the arrival of $500 NCs aimed at consumers will rapidly extend Internet access beyond existing PC-owning households. Ultimately, the success of the NC and other Internet appliances in the consumer market depends not on price but on them delivering easy-to-use services that will keep consumers coming back for more.

The only way to do this, Mr Iacobucci believes, is to shift the Internet's complexity away from the consumer and create an infrastructure of powerful information servers operated by service providers, such as telecom or cable TV companies, and connected to the home using high-speed networks.

"We need to centralise the complexity and distribute simplicity," he says. The servers would offer a huge range of digital services tailored to the needs of each consumer and priced on a pay-as-you-use basis. The services could include Internet access, text, video and audio programming, or local information, such as play-list of films showing locally or restaurant guides.

Ovum predicts nearly 100m non-PC Internet access devices will be installed in homes by 2005, and the IT industry clearly sees the cyberhome as a golden opportunity to extend its reach into new markets. But, ultimately, it is the consumer who will decide which digital products truly enrich their lives – and which are left gathering dust on the shop shelf.

□ Education in the Internet age: the fast track to online learning; developments in the US and Europe: see pages 10-11.
□ Investment in the computer games industry: pages 12-13

INTERVIEW • Paul Taylor talks with **Eric Benhamou**, chief executive of 3Com, the networking company

Audacious move to IT's big league

Under Benhamou, California-based 3Com has gone from manufacturing components for networks to connecting the globe with them

Pervasive global networking – the ability to link any users, any time and anywhere – is at the heart of Eric Benhamou's vision for 3Com.

Since taking over as 3Com's chief executive seven years ago, Mr Benhamou, a Stanford electrical engineering graduate, has transformed the Santa Clara-based group from an obscure manufacturer of network components into one of the IT industry's most dynamic companies.

The company, whose name derives from computer, communications and compatibility, was founded in 1979 by Robert Metcalfe, co-inventor of Ethernet, the most popular networking technology in the world.

However, it has been the explosion of interest in networking and inter-networking in the 1990s – coupled with a string of shrewd acquisitions orchestrated by Mr Benhamou – that has catapulted the group into the IT big league. 3Com's revenues last year were $5.6bn.

But Mr Benhamou's most audacious move came earlier this year when 3Com completed the $7.3bn purchase of US Robotics, the leader of the modem communications market.

"The US Robotics transaction was a multi-dimensional transaction," says Mr Benhamou. "It is hard to reduce it to one thing, but early on our primary motivation was to expand our scope to include remote access solutions."

What Mr Benhamou realised was that corporate networks had reached a point where they were already well established in large buildings and throughout corporate campuses. But increasingly 3Com's customers wanted to tie their mobile sales forces, branch offices and partners into their head office networks.

3Com had a strong local area network (Lan) heritage, but it needed to expand into the wide area network (Wan) market. "Remote access is a second phase application," says Mr Benhamou. "In other words, you have to first have network in your main sites before you can provide meaningful remote access – we are just getting into the mainstream of that second phase."

Mr Benhamou reasoned that 3Com could either develop remote-access products internally or do it through an acquisition. He decided internal development would take too long.

"We decided to be bold and acquire the largest company in that business which is US Robotics. By virtue of that acquisition we have moved into the number one position in the coveted market segment of remote access."

He says 3Com was particularly attracted to US Robotics because the two companies fitted together with little overlap. "During due diligence we did an assessment and decided that about two or three per cent of our revenues were in overlap, which was remarkable for two multi-billion dollar companies."

US robotics had strengths in the modem area. "The kind that subscribers buy and also the modems that service providers need to integrate into their central sites," says Mr Benhamou.

"It turns out that modem technology is extremely difficult to master and we felt that US Robotics was really the best in class company, being the leading modem vendor in the world and having very strong brand identification with modems."

In addition, US Robotics had developed two of the channels that were rather weak at 3Com. "One was the carrier and ISP channel, and the other one was the retail channel. If you look at what 3Com had then, we had a very strong enterprise channel and a very strong volume distribution channel. But we did not have much of an impact on the carrier and ISP world, nor had we started to develop in earnest our retail channel.

"We certainly knew that transactions like this are difficult to pull off, but we felt that the reward was going to be enormous. We believe that this transaction has resulted in moving us into an extremely strategic position and basically closing in the gap that separated us from Cisco."

As a result of the deal, 3Com and its arch-rival, Cisco, are roughly the same size. "We have created this very large gap between ourselves and the other companies such as Bay, Cabletron and the smaller ones," says Mr Benhamou. "The landscape in our industry has been very materially altered."

Today 3Com is in contention for almost all the big networking contracts. In addition 3Com can now bid for end-to-end networking contracts that involve remote access, Mr Benhamou says. For example many banks are developing online banking services which require end-to-end connectivity.

US Robotics experience in the retail market will help 3Com target the fast growing SoHo networking market.

"It would be very narrow-minded to think networks would only exist in the enterprise," notes the 3Com chief executive. "In fact, for a long time we have anticipated networks would start to penetrate small businesses and consumers. The market is not big yet, but three years from now it could be extremely large."

US Robotics also brought 3Com another well-established brand name. "We are now at a stage in our industry where brand matters a great deal. Technology has become so complex, so diversified and so broad that customers will rely upon the power of the brand as a proxy for how solid a company is and how much of a technology leader it is.

"Today our brand is by far the strongest brand in the industry, by virtue of how many years we have been in business, our global presence and the fact that we have used resellers more than many of our competitors. All of our products will be 3Com-branded, but we have kept US Robotics as our brand for modems, so modems will be called '3Com US Robotics' modems."

Another bonus from the deal is that US Robotics brought with it the PalmPilot hand-held personal computer business. The PalmPilot is already highly successful in the US where more than a million of the machines have been sold.

"It fits beautifully in with our strategy because we think of it as an extension of the network which people carry literally in their shirt pocket."

Mr Benhamou has big ambitions for the machine. "This device is going to be increasingly well-connected to the network. Today, it already has TCP/IP connectivity. People can receive mail on it. They can log on to the Internet.

"There is a modem accessory as well, and in the near future there will be other very interesting connectivity features added – such as paging, radio and infra-red connectivity."

So what sort of company is Mr Benhamou trying to build?

He insists that 3Com does not have a single model. "The challenge we have is to build a company that has never been built before. What makes us different is that I think our industry moves faster than most so we have to be extremely fast, yet at the same time our customers want us to be big and stable and financially extremely resourceful.

"At the same time, we have to be extremely focused in creating a cohesive network for customers, and yet the pieces have to be extremely loosely connected. If we tighten it up, the company would slow down. So we think the answer is to create a very strong shared vision."

To help achieve this, Mr Benhamou is using the power of 3Com's own networks. The company has a worldwide intranet and made a point of integrating US Robotics 7,000 employees the first day after the acquisition closed. 3Com is also rolling out SAP's enterprise resource planning software across all its operations.

"This gives us a way to move forward quickly towards a single company. We are using the IT environment as a binding agent for the company."

"It is through aggressive investments like this that I think we can create a one-of-a-kind company."

However, Mr Benhamou recognises that any attempt to impose uniformity over the group's diverse research and development operations could be counter-productive.

"I have learnt over the years that you should not tell engineers which tools to use to build products."

3Com is also spreading its R&D dollars across a range of technologies rather than betting on the success of one technology over another. "ATM has now become completely mainstream and is growing fast and will be part of all next generation networks. We also have high hopes that gigabit Ethernet will be a very successful backbone technology. It is not an either/or choice."

He argues that since the two technologies are optimised for different purposes – ATM for scalability and Gigabit Ethernet for simplicity – both can be successful. "So we are investing roughly the same amounts in both technologies."

3Com is also investing heavily in a range of technologies designed to speed access to the Internet. He says 3Com is investing in xDSL, wireless technologies and cable modem technologies, because the company believes "cable companies will successfully deploy data services on their cable plants".

"Data over cable will be driven by Internet applications rather than telephony," he says. "There are starting to be some ISP's that are deploying high speed Internet over the cable plant successfully, and that is really what we are betting on.

"We think there will be an explosion in the diversity of access methods to the next generation Internet. Today most people access the Internet using analogue telephony. We think there will be multiple speeds of analogue connections, x2 being the latest, multiple speeds of digital with the various xDSL implementations, and there will be multiple kinds of wireless access."

Meanwhile, the consolidation underway in the networking industry will continue. "I think there is room for Cisco and 3Com as providers of complete solutions, and I don't think any of the others can pursue the same strategy as us. They can perhaps pursue successful niche strategies but not a broad strategy.

"Is there room for a third large player? The answer is perhaps, but it would be difficult. I don't think it could be developed organically," he says. He thinks a merger involving a big company from outside the sector, perhaps a telecoms equipment supplier, is more likely.

"We have raised the bar of what is big in our industry to at least $7bn or $8bn in revenues. The game is now moving to the end phase where the boundaries and the power structures will be less likely to change.

"Consolidation will certainly continue, but around more stable players."

Benhamou: 'We decided to be bold'

3Com's top man

Eric Benhamou, aged 41, chairman and chief executive

Education: Attained MSc degree in electrical engineering from Stanford and a Diplome d'Ingenieur from Ecole Nationale Superieure d'Arts et Metiers, Paris.

Career: After spending four years as project manager, software engineering manager and design engineer at Zilog, he co-founded Bridge Communications in 1981. He was vice president of engineering until it was acquired by 3Com in 1987. He held senior management positions in engineering and operations at 3Com before becoming chief executive in September 1990. He was named chairman in July, 1994.

Other activities: Mr Benhamou chairs the American Electronics Association's National Information Infrastructure (NII) Task Force. Since 1993, he has also served on the board of Smart Valley, a non-profit organisation aimed at furthering the use of advanced technology in Silicon Valley.

NEW GUIDE FOR COMPANIES • By Michael Wiltshire

Route to the networked economy

A new, free guide for small and medium-sized businesses, entitled *Your route to the Networked Economy*, has just been published by InterForum, the UK advisory organisation.

InterForum, a not-for-profit advisory group of IT suppliers and users, aims to help businesses improve performance through the understanding and application of networked computing technologies.

The new guide – the second in a series of 'white papers' – points out that the global networked economy is forecast to exceed $220bn within the next five years.

Philip Flaxton, executive director of InterForum, comments: "Although bigger British companies tend to use information technology well, there is a worryingly high number of small organisations that do not do so."

Howvere, the UK is well-placed to adapt to new technology through its relatively liberal telecommunications regime and through its early experiences with computing, he adds.

InterForum organises executive briefings on networking in business. At its latest London event, hosted by the Financial Times, the keynote speaker, Barbara Roche MP, the UK government minister responsible for smaller businesses as well as the communications and information industries, was 'bullish' about the prospects for UK industry as it adapts to the use of the Internet and electronic commerce.

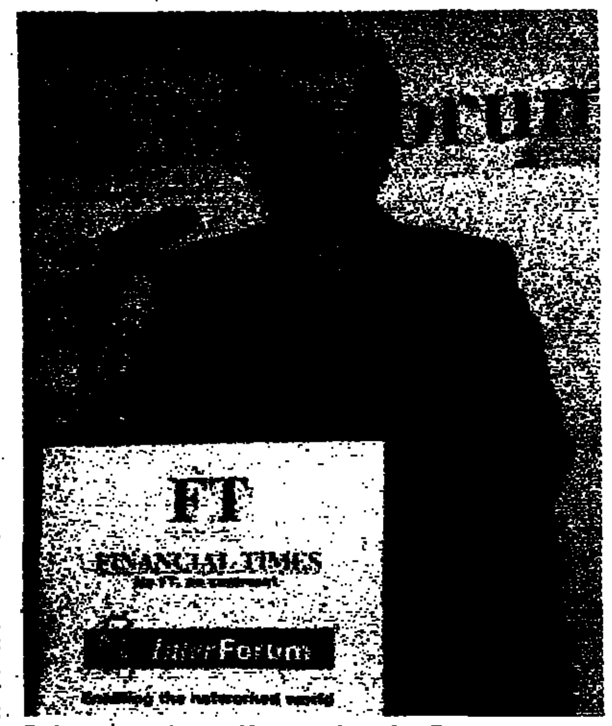
"The UK can be a world-beater and world leader," she said and urged the SME marketplace to embrace these new technologies without delay.

The technology gave the possibility "for our smallest firms to be able to compete with the very largest of companies in a global market."

Geoff Morris, chairman of InterForum, also urged UK business "to grasp the Internet as a business medium." He pointed out that invisible earnings, "which run into billions of pounds, escape the UK to the US treasury, simply through the fact that the vast majority of computer systems that manage these activities are based in America."

The onus was now on the IT vendor community to support and educate the SME market, he said. By removing country boundaries and "making a nonsense of geography," the Internet also poses a threat to local business, he added. Internet technology would simplify to the point where it was as easy to use as a phone – "therefore, education on the issues involved becomes even more relevant."

□ For a copy of the latest guide, which includes a list of information sources regarding electronic commerce, contact InterForum at Winkworth House, 83 St Jude's Road, Englefield Green, Surrey, TW20 0DF; or telephone +44 (0)1784 473 005; fax +44 (0)1784 473 006. The web site is on: *http://www.interforum.org*



Barbara Roche MP, speaking at the latest InterForum executive briefing, hosted by the FT, was 'bullish' about the prospects for UK industry as it adopts electronic commerce

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FOCUS ON ONLINE SERVICES

Here, and on the following 11 pages, FT writers look at developments in online services and electronic commerce:

Internet information will be sorted, packaged and sold

The Internet is forcing consumer and business information services to change the way they do business. Success now lies in wrapping Internet content into attractive and easy-to-use forms, writes Paul Taylor

The rapid growth of the Internet over the past few years has wrought substantial change in the traditional consumer online and business information market and continues to reshape the industry.

For the established service providers in the consumer market – America Online, CompuServe and MSN – and those in the business world – Reuters, Dow Jones and Primark – the growth of the Internet has meant both challenges and opportunities.

In particular most of the traditional online information providers have been forced to move away from their proprietary technologies and interfaces towards more open Internet standards.

"The Internet is playing a key role in restructuring the online industry," notes a report on the European online market published in July by Frost & Sullivan, the market research firm.

"Most companies will need to adapt very quickly to changes taking place on the Internet to keep up their market share. If they cannot, a high threat is seen coming from ISPs providing powerful and capable search engines," write the authors.

Most consumer online service providers, including AOL, have been forced to adopt flat rate pricing and to reposition themselves as ISPs that offer value-added services.

The impact of these changes and the renewed emphasis they place on proprietary content are apparent in the restructuring of the consumer online industry. This has culminated in the three-way WorldCom-CompuServe-AOL deal announced in September.

Under the terms of that deal, WorldCom is buying CompuServe, then swapping the company's online information business for AOL's network infrastructure operations.

For AOL, the deal consolidates its position as the market leader in the provision of consumer online services. The company has more than 10m subscribers worldwide and extends AOL's reach in Europe and the business market.

Immediately after the merger was announced, Steve Case, AOL chairman, said CompuServe would retain its focus on small businesses and the professional market, while AOL would continue to target "the mass market". CompuServe has around 2.6m subscribers, including 900,000 in Europe.

"The deal will extend and diversify our community of users, especially in Europe and among business users," said Case. He also sought to reassure existing CompuServe users that they could expect the same services, using the same technology and software as they did before the take-over.

The addition of CompuServe "will broaden AOL's audience reach to 12m members worldwide as well as give the company a second, differentiated online service with many of the same advertising and e-commerce opportunities as the core service," explain analysts Hambrecht & Quist in a recent research note on the company.

The acquisition also has serious implications for the European consumer online services market. Datamonitor, the market research firm, predicted earlier this year that this market would grow from \$1.5bn to \$13.7bn by 2001.

The deal should also strengthen the alliance between AOL and Bertelsmann, the world's third largest media group. Bertelsmann already has close links through AOL Europe, which they jointly own.

This is important because it will strengthen their position as they square up to Deutsche Telekom, the European market leader. Deutsche Telekom's successful T-Online service has around 1.4m users.

The two groups are competing for leadership in Germany, potentially the biggest European market, and in other large markets such as the UK. This is coming ahead of deregulation of the European telecommunications industry, which is expected to generate strong growth and tempt new entrants.

Significantly the WorldCom/AOL/CompuServe deal also frees both AOL and CompuServe from the separate business of network provision and management. This enables the two companies to concentrate on content and strategy.

The value added through unique or specially repacked content is likely to be a key differentiator between rival online services as they battle to win and retain subscribers in the future.

This fact is clearly recognised by MSN, Microsoft's consumer online service. The service was launched in 1995 as a proprietary service, but was quickly recast using Internet technologies as an Internet service provider and content aggregator.

MSN unlike AOL and CompuServe began by purchasing Internet access wholesale for its members, rather than building and owning its own network. MSN has also gone further than either of its rivals in integrating Internet technologies into the whole of its operations.

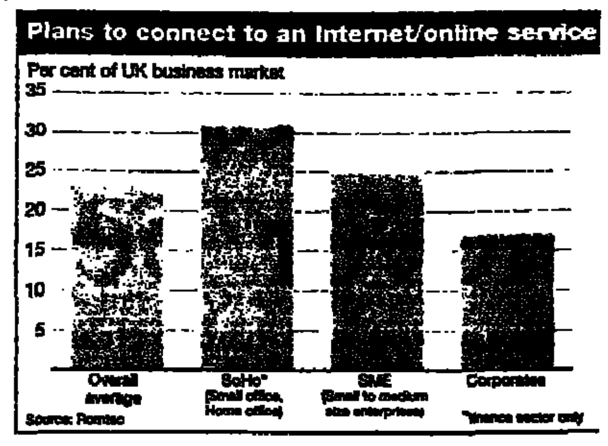
Both AOL and CompuServe still rely on proprietary back office systems. This, says Judy Gibbons, MSN's UK director, could slow down their ability to react to change in the future given the speed of innovation on the Internet.

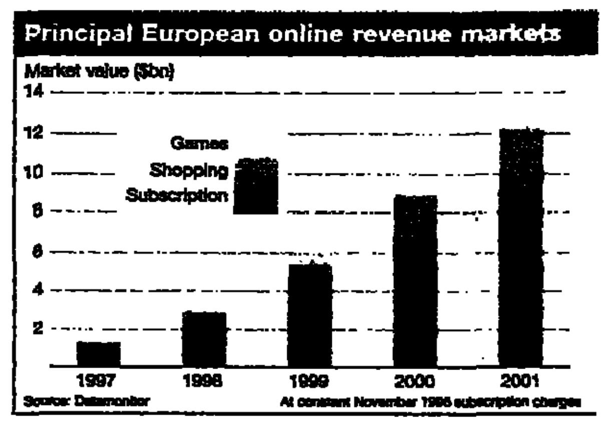
In contrast, MSN has been through a series of dramatic changes since its launch. It has about 2.5m subscribers worldwide, which ranks it number three after AOL and CompuServe. MSN also serves several different markets, says Gibbons.

She identifies one of its roles as providing an easy-to-use one-stop shop for Internet access, particularly for new users. This role, Gibbons says, will continue "as long as there is market demand".

In addition, she says, MSN aims to be a "portal" – or gateway – to other Internet-based content and services and an aggregator of content to assist its members' searches rather than requiring them to use complex search engines.

However, Microsoft has also launched a number of other value-added electronic commerce services around MSN in the US. These include its Expedia travel service, a premium rate personal finance service.





As providing basic Internet access becomes a commodity service and information becomes easier to find on the Net, niche players in the consumer online service sector will need to look closely at providing relevant local or special interest group content if they are to survive.

In Britain, for example, Virgin Net, LineOne and Which Online are all battling to attract and retain subscribers by delivering "extra value".

Similar forces are reshaping the business online information market. In particular, the growth of the world wide web – providing users with access to huge volumes of free information – is prompting many business users to reassess their online information supplies.

As a report published last month by Learned Information notes: "A recent survey of European Business Internet users has revealed that the Internet has caused the decrease of use of conventional online business information in more than a fifth of all cases.

"This will have a major impact on the future marketing strategies of conventional online services as the full impact of free information has yet to be realised."

Nevertheless, the growth of the Internet has also provided the more nimble and flexible online services, particularly those in the business information market, with new business opportunities.

"Initially, online database providers perceived the Internet as a threat to their existence," notes Frost & Sullivan. "However, this scenario quickly changed as today, most companies realise that the Internet has created an information technology culture and has educated many people regarding the merits of online information.

"Many online database companies are present on the Internet and offer part, or all, of their database information on the web as well as on databases."

Primark, the US based business information group that acquired London-based ICV a year ago, views the

Turn to next page

SELECTING ONLINE SERVICES • By Tom Foremski

Pick and choose, it has never been easier

Many services work hard to create online communities and offer subscribers a user-interface that organises content in clear ways

Choosing an online service is becoming easier. The confusing array of choices has narrowed as the number of online services has decreased through industry-wide consolidation and competition from the Internet.

Market leader America Online acquired Compuserve earlier this year. This left just three leading worldwide online services – AOL, Prodigy and Microsoft Network.

MSN is a relative newcomer among online services. It has built a network of more than two million subscribers, thanks mainly to aggressive promotional deals and distribution of its client software on tens of millions of Windows personal computers.

For many years, online services represented the only online experience for millions of people. The companies charged hourly rates as high as $20 to $30 for premium services and about $5 per hour for basic services. They offered online newspapers, research services and discussion groups. Compuserve led the market for many years, focusing its services on professionals. AOL built its business by targeting the consumer market.

The Internet then started growing, and things changed quickly. Internet Service Providers began offering low priced flat-rate access to the Internet. With these deals there was no clock to watch in terms of staying online for too long, and monthly bills no longer strayed into hundreds of pounds. The Internet also provided more than users knew what to do with, compared with the relatively limited content of online services.

Many believed online services would become a thing of the past, but that didn't happen because they began changing their business models to not only accommodate the challenges of the Internet, but also to exploit it.

AOL, for example, introduced low flat-rate monthly plans. This attracted many new users but also caused a massive strain on its network until it added new capacity. It also introduced its own web browser, giving its subscribers access to the Internet.

Online services are still a good choice, especially for newcomers. They offer a user interface that organises content in clear and distinct ways. They have online forums that help users with questions, and they also offer Internet access acting as ISPs. For example, MSN says that for about the same price as a user would pay for an ISP, they also get access to the online service.

The online services work hard at creating online communities. Their various forums unite hobbyists. Their chat rooms are one of the most popular features of online services. These online communities hook subscribers. They make it more likely that subscribers will stay with the service, and more likely that they will put up with recurrent problems – in e-mail delivery, with 'outages', and with slow responses during peak usage times.

When consumers choose an online service they mostly look at local availability and content. Fortunately, all of the major online services offer free introductory periods for at least a month. In fact, many people take advantage of these free offers, and repeatedly switch between online services in a practice known as churning. But most eventually settle down with one online service. Even if they choose a local ISP for better Internet access, they will often maintain their account with an online service.

"I like to keep my AOL account, even though I hardly use it, because of it's a worldwide network," says Tom Daniels, a US sales director.

"When I'm travelling abroad, I can call up a local AOL access number and retrieve e-mail and check on my stocks and read my local newspaper," he explains.

E-mail is one of the most popular applications offered by online services. They offer a simple user interface and add other features such as instant chat, which allows users to contact their friends while they are online in real-time.

But online service subscribers are a key target of what is called spam e-mail. This is junk e-mail that can rapidly clog subscriber's mail boxes.

Steve Case, AOL chief executive, says that "receiving unsolicited junk e-mail is the number one complaint we hear from our members". Spam e-mail also slows down e-mail delivery and system response times – two other key complaints of AOL members.

AOL is taking the lead in stamping out spam e-mail. It has filed several lawsuits against companies that churn out tens of millions of junk e-mails on a daily basis. It also offers users a chance to block spam e-mail.

To help boost revenues, online services are also beefing up their web sites to take advantage of new business opportunities. These include providing web site hosting services and attracting web site advertisers. AOL's web site is one of the most popular, receiving millions of visits per day.

MSN, for example, plans to offer Internet search services for its web site that, it hopes, will not only help subscribers find what they want on the Internet but will also attract Internet users.

When it is introduced early next year, Microsoft's search engine, it claims, will provide the most current search results of any online search engine. The Microsoft search engine, known by its code-name Yukon, will debut on its MSN.COM web site and on its subscription based MSN online service.

The entrenched positions of the leading online services, and competition from the Internet, means that there is not likely to be any new competition.

Europe Online, for example, did not last long but it did reorganise and emerge as an ISP.

Online services are also trying to expand into new geographic markets.

Prodigy introduced Africa Online. Earlier this year, it announced a $12.5m investment in Africa Online, which establishes it as the single largest ISP in Africa.

Online services have so far managed to survive the competition from the Internet. They have carved out a niche that provides users with a valuable service.

Business information services: golden nuggets on a long and winding road – see page 6

Making discoveries online at the Cafe Internet in London

Forging strong connections

The vast number of Internet Service Providers has left many users confused over which ISP to choose. The decision begins with researching the services on offer

Hooking up a connection to the Internet through a local Internet Service Provider (ISP) is easy. Finding a good ISP, on the other hand, may be a little more complicated.

The boom in the Internet has created a massive number of ISPs. Some are run by huge telecommunications companies; others are small family operations. Each has advantages and disadvantages.

In making the choice, it is worthwhile to bear in mind the economics of a fast-changing business and ensure that your ISP will still be around in a few years time.

Forrester Research, a market research company, predicts that out of the nearly 4,000 ISPs in the US, only about 500 will still be around by 2000. By that time about 50 percent of the market will be dominated by large telecommunications companies.

Still, there will be a place for regional and specialised ISPs that are able to host different kinds of Internet services.

"Today's plain vanilla ISP services – basic access, simple Web hosting, and e-mail – will evolve into a richer depth of compentencies in the areas of access, hosting, and communications," says Christopher Mines, senior analyst at Forrester.

"ISPs will differentiate themselves by offering business users guaranteed access, diversifying the breadth of applications they support, and providing Internet communications services like fax and phone."

With such volatility in the market, Forrester says that there are no easy rules to apply in choosing an ISP.

"Users should forget a single provider approach. Users will not be satisfied unless they seek out the best provider for each different type of service they need, and they evaluate their ISP often," recommends Mr Mines.

Scott Pollard, director of BusinessNet, a London-based ISP, says: "Many ISPs out there at the moment are nickel and dime companies, targeting the low revenue home user market.

"Most of these are likely to vanish once they've reached critical mass, leaving the residential market to the phone or cable companies who are good at collecting little bits of money from lots of people.

"ISPs need to be clearly focussed and responsive to the business market.

Specialist corporate providers like BusinessNet will continue to flourish, especially if they provide a full range of services – allowing companies to outsource the management of their security, data exchange, e-commerce initiatives or information networks.

"For example, we are currently launching an information network designed specifically for the City of London."

While switching ISPs is simple, the change can be disruptive. E-mail addresses are linked to the host ISP and changing ISPs can mean changing a business's e-mail address. Thousands of clients and customers are then, of course, required to change their e-mail address books.

One way around this problem is to register a web site domain name and use e-mail addresses linked to that name. The domain name can be transferred to any ISP and ensures that e-mail addresses don't change. Registering a domain name is inexpensive and can be arranged in minutes.

Most companies set up a web site – even if it is a simple site listing only the company's products, address and contact information.

Usually, ISPs that provides e-mail services also offer web site hosting services. There are, however, sound reasons for choosing a different ISP to host the web site from the one that provides your e-mail.

A smaller ISP may have slower links to the Internet. This can mean delays in trying to access the company's web pages. And there is no better way to turn away potential customers than a web site that takes a long time to download.

Download times rely both on the design of the web pageand the speed of the connections. There are now several companies that specialise in web site hosting and offer fast Internet links. US-based Tabnet, for example, boasts the world's fastest servers for web site hosting. More than 1 gigabits per second is offered at its Santa Clara, California site.

Tabnet hosts more than 40,300 web sites. It says it has designed its site to eliminate problems associated with any one server. The rest of its network takes over if any server fails.

Businesses also have a variety of options, including having their web site hosted on a Silicon Graphics supercomputer, plus there are additional choices for electronic commerce.

With the global reach of the Internet, companies do not need to choose a local ISP to handle its web site. Tabnet says it hosts web sites from 73 countries and every continent including Antarctica.

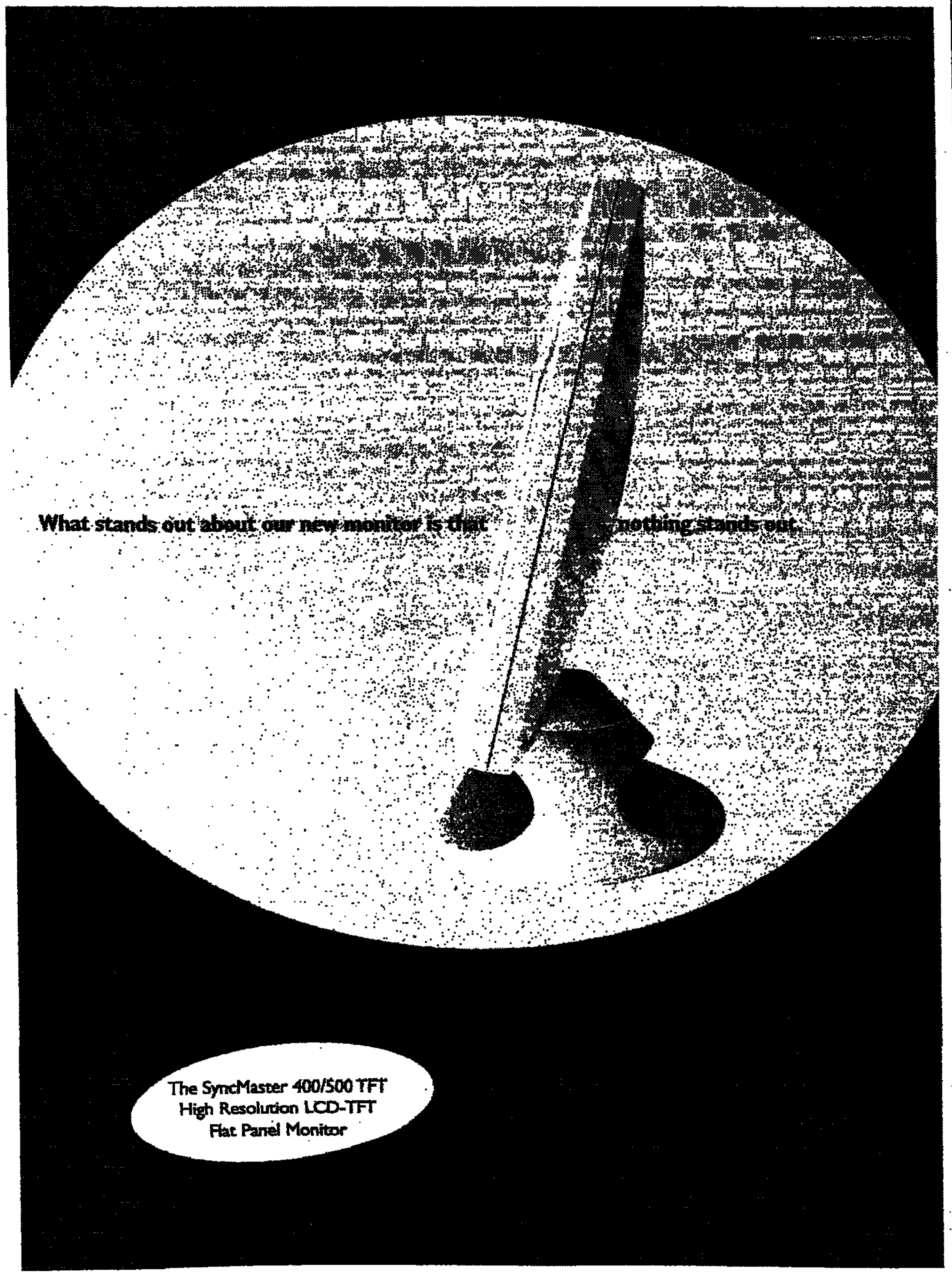
Fast access to the Internet is also important. Some ISPs offer ISDN connections, while others offer cheaper, 56 Kbit modem connections. But because there are currently two 56 Kbit standards – the 3Com X2 and the Rockwell Semiconductor K56flex standard – it is important to make sure that an ISP can support one or both types of connections.

For home users, the choice of ISP often comes down to price. Low monthly rates with unlimited access is tempting – but if lines are often busy or the web servers are over-loaded, the choice becomes a trade off between price and patience.

In the US, local telephone calls are not metered. But in Europe, local calls are charged by the minute. In Europe, an inexpensive ISP with slow web servers may end up costing more in telephone charges, than a more expensive ISP with faster connections.

Technical support is another issue. Larger ISPs can afford to run support centres 24 hours a day, seven days a week. Smaller ISPs do not have such resources.

But smaller ISPs can do an excellent job serving smaller, remote locations. They can bring Internet access to communities that the larger ISPs have shunned because of a focus on urban markets.



IMPACT OF THE INTERNET

'History is in the making'

From previous page

growth of the Internet as an opportunity.

Joseph Kasputys, Primark's chief executive, says: "For us the Internet has been great." In particular, it has opened up a distribution mechanism "which is available to everyone" and highlighted the value of sifting through the masses of data available for relevant content.

In future, the key to being a successful business information provider will be to provide global reach and become indispensible to customers, he says.

"If you want to be successful in financial information, you need to be large and very complete and that is what has driven our acquisition and growth strategy."

In a speech to the Information Industry Association in San Francisco in October, Mr Kasputys outlined six principles for information companies to follow if they want to seize the digital advantage.

Business online information suppliers must constantly generate proprietary data, emphasise relevance, present data in an integrated manner, provide end-user applications, link with other databases and "have an uncompromising commitment to quality", he says.

As business information providers fine tune their services to provide users with information feeds over corporate intranets, "the real battle in the future will be for server space on intranets", Mr Kasputys explains.

As Frost & Sullivan notes, "increased competition in the business environment along with various economic factors, has meant that online information sources are seen as an integral part of the workplace. As a result of technological innovation, these databases are increasing in sophistication at a very rapid pace".

However, as with others in the industry, Mr Kasputys also believes that pure aggregators – those that simply collect, assemble and rebundle content owned by others – are most vulnerable. "Aggregators are much more threatened by changes in technology."

The need to acquire access to proprietary data is likely to continue to fuel the wave of mergers and acquisitions already evident in the industry. Aside from Primark, most of the other big online business information suppliers have been active in the M&A market recently and there are rumours that other businesses, including Dow Jones Market Services, could be up for sale.

Among recent deals, Maid, the UK-based online business information company, raised £119.9m through a share placing in October to help fund its $420m acquisition of Knight-Ridder Information.

Indeed, Maid's growth highlights the changes underway in an industry where, as Mr Kasputys notes, half of the 14 companies that attended the first meeting of the Information Industry Association in Philadelphia in 1968 no longer exist.

Meanwhile, the Internet, whose US military origins date back to the same period, is expected to have 300m users within the next few years – all hungry for information.

As Mr Gibbons, from MSN, notes: "I can't think of a better place to be right now. History is in the making."

INTERNET AND SMALL/MEDIUM-SIZED COMPANIES • By Mark Vernon

Walk softly, go slowly, carry a broad vision

A smart web page is not necessarily the key to online success. SMEs need to slow down, refocus their vision and take a longer-term view of Internet possibilities

The Internet offers tremendous opportunities to small and medium-sized enterprises. With the services of others in the supply chain, SMEs can use the Internet to reach a global market as never before.

Success, however, amounts to a whole lot more than putting a few Web pages online. They say no one is a dog on the Internet – but those retailers who achieve profitable Internet commerce have done so because they have clearly identified a niche and exploited it. It is becoming clear that the Internet needs to be handled carefully to avoid burnt fingers.

Above all else, it is perhaps the undifferentiated hype around the new technology that has hindered the growth of businesses in this area. As Jon Beverly from Upstart Consultancy comments: "Whenever we are discussing the Internet with clients, top of their list of concerns is the short-termist rush to market the Internet to them. There are some of them who are up to their ears in mailshots and telesales calls."

BusinessNet, the Internet service provider, is an interesting casualty in the SME arena. The company began with the specific goal of becoming a leading player in the online SME field. But it is now allowing its business to "drift up" towards the larger, more lucrative clients.

Scott Pollard, director, expresses his sadness at the company's predicament. He believes enterprises are missing a trick. "We were deeply disappointed at the lack of imagination we found in SMEs approaching the Internet opportunity," he says. It is not just a proper understanding of the channel that will be necessary to rectify the situation. Nor is it simply improvements in technology. What is required is a change in entrenched attitudes towards marketing spend. "Think of the amount companies are prepared to invest in a trade show with little or no tangible return, compared to the cheapness of IT," Mr Pollard points out.

There are signs, however, of maturation. Cotton Oxford, the retailer of rugby shirts, provides an illuminating case. Cotton Oxford supplies 60 per cent of the UK's Premier Division clubs. Not surprisingly, it had not thought of the Internet as a viable medium for sales growth – demographics do not suggest that the typical rugby fan is a net shopper.

But this fact misses the point. Although Cotton Oxford sells only 100 shirts a month over the Web, Phil Morgan, sales director, explains that if the sole criterion for measuring the worth of a site was sales volumes then many companies, not only SMEs, would not invest in Internet commerce.

"Eventually it will be profitable, though I cannot really see it for a while," Mr Morgan says. "We wanted to get in early, and [we] realise we are in it for the long run."

The project is viable for other reasons, Mr Morgan says. For one thing the cost of the site was offset by a joint venture with Web developer Explora. This partnership is made doubly attractive since it is the ongoing costs as well as the initial investment that draws heavily on revenues.

Fresh leads

More positively, Cotton Oxford has seen leads developing with distributors from around the world. This expansion simply would not have happened had it not been for the Internet. Mr Morgan has just signed an agreement with an American retailer from a contact that sprang solely from the Web site. "Potentially, this could be very profitable," Mr Morgan says.

This is not to say that direct profits are not possible. The Independent Holiday Shop has been selling online since February 1995. Internet commerce represents about 10 per cent of the company's sales volumes.

Making money has been possible for Independent Holiday Shop partly because the initial costs were kept low. The company used in-house skills that avoided "the rip-off merchants" who charge a fortune to get enterprises online, says Brian Parker, a partner in the business.

A full, demographic understanding of the channel is vital in utilising the Internet. At the Independent Holiday Shop, typically the customer who comes through the door spends £300 per head on holidays. The customer who purchases virtually spends £1,000 per head. Many of these individuals are from the Internet-savvy US. The typical American customer organises a relatively expensive holiday, such as a tour around Europe including luxuries such as a villa in Italy. (The Independent Holiday Shop's web address is a bonus, and surely the envy of any British travel agent – *www.holidays.co.uk*)

The Internet should be attractive to SMEs in the business-to-business environment too, as a rival to electronic data interchange (EDI). "Traditional EDI is proprietary, costly and difficult to implement because you have to realise a very integrated supply chain, getting companies that you want to work with to buy into the technology," says Jennie Edmondson, UK marketing manager for Electronic Commerce, Oracle.

Furthermore, once in place, EDI imposes inevitable limits on potentially new relationships as companies find themselves technologically tied together. "There is still a place for it, but the Internet has opened up the possibilities for a very flexible supply chain to work with partners," Ms Edmondson adds. As a cheap, ubiquitous form of communication, the Internet should become a mass market tool for business for activities such as non-strategic purchasing.

The setting of standards and the inevitable worries about security are holding up developments. "We are telling many of our smaller customers to slow down for the while," says Joe Macri head of the SME department at Microsoft. He emphasises that thorough planning is necessary if companies are to capitalise on the new medium.

"Actually there is a whole range of benefits the Internet can bring before one actually gets to electronic commerce, just by virtue of being a massive source of information," he says.

Mr Macri points to a Web site where SMEs can find information about how the Internet can be of use to them. The site is part of a government initiative called the Enterprise Zone. The address is *www.enterprise-zone.org.uk*

KING OF CHAT GOES ONLINE: TV personality Clive Anderson talked from the other side of the interviewing table when he launched the BBC's new online chat forum, 'Oi!'. For an hour he put himself in the firing line by volunteering to answer questions, live, from the public. Other celebraties are lined up to answer questions on Oi! (www.beeb.com). The commercial web service has been developed in alliance with ICL, the IT systems and services company

SEAMLESS CONNECTIONS • By Mark Vernon

Where voice, video and data converge

Universal connectivity is the goal for business and domestic users. Mobile phones are the first step

Within five years, "the world will be embraced by an Internet-based network that provides seamless access to voice, video and data". This was a prediction made by Edward Kozel, Cisco Systems' chief technology officer, at the recent Networld Interop conference in Atlanta.

Edward Kozel, of Cisco Systems, predicts: 'An Internet-based network will provide seamless access'

The early manifestations of this universal connectivity, for both the business and domestic user, are in mobile phone services found online. Unified messaging provides the delivery of voice, fax and text to the same hand-held unit. The Internet is providing the infrastructure upon which these different data types can cheaply and powerfully converge.

Telecommunication companies are increasingly feeling the threat of falling tariffs for voice carriage, which has been to date their main earner. Their rush to offer new services based upon open networks is set to gain pace at the turn of the millennium.

The delivery of Web content to mobiles is receiving early attention. At present, simple structured data is supplied – anything from financial information to football scores. Information supplied by Cellnet in the UK is typical of what is on offer.

The next level of service comes with the ability to check email from the mobile. The real interest here is in the automatic handling of messages, known as knowledge management services. This allows the user to receive sorted summaries of emails or only filtered messages – first by address and subject, and then by concepts. Obvious benefits exist here in dealing with junk email.

At the same time, the automatic processing of messages will come online, including forwarding and even reply, according to rules established by the user. Mobile phone subscriptions will also include the ability to pay bills and book theatre tickets.

Unlike Cellnet and others who are adopting a more evolutionary approach, Telia, the Swedish telecommunications company, has taken the leap to advanced mobile data communications. Jan Moser, business development manager, explains why.

"The industry as a whole predicts that non-voice traffic will rise to 30-50 per cent over the mobile networks by 2000/2001, so that is a really big issue for us," he says.

Apart from the need to diversify sources of revenue, another important factor is to fight churn, the loss of customers to competitors with more attractive services. The Internet is playing an important part here as well.

"We are seeing that it is becoming more and more useful for us to use the Internet, first of all as a customer interface, then to deliver services, including the checking of mobile bills, changing forward calling details and so on. The point is that, over the Web, all this can be done remotely with a more satisfactory interface than is achievable with Interactive Voice Recognition [technology that recognises voices over the telephone]." Oracle's Web server and InterOffice product is being used to create highly customised Web pages utilizing dynamic HTML.

Telia is ahead of most in what it offers – a risky place to be. John Moroney, new media principle consultant with the research group Ovum, explains that the key to the general growth of these services will be the "connectionless connection". This means a phone can effectively be online all of the time without the demand on bandwidth that current technology dictates.

"Services will then run independently of time and location, so that a user can take their network identity and wonder all around the

Continued on next page

PUSH TECHNOLOGIES • By Tom Foremski

Quest for applications for an over-hyped technology

Early promoters of push technology pledged more than they could deliver – now they are seeing a backlash

Internet push technologies have been demoted from last year's hot new technology to the lowly position of last year's big thing. More promises were made than could be delivered. And the squabbles that erupted over industry standards proved a mistake considering the Internet community's standards-oriented focus.

Push technology received a great deal of attention over the past year for its promise of sending personally specified information to a user's computer over the Internet. The idea is that instead of the user connecting to a web site and clicking on various links, key parts of the entire site is in essence be broadcast to the user's hard drive. Since the information is downloaded, users can read it much more quickly, and only new information is being sent to the user.

Push was pioneered by California-based Pointcast. Pointcast Network began broadcasting pushed news and advertising directly to users' computers in early 1996. Pointcast has more than 1.5m users: it delivers news feeds from leading US newspapers such as the New York Times, Wall Street Journal and regional newspapers, plus stock quotes and company information.

The initial success of Pointcast prompted other firms to enter the push market with tools, applications and services. Silicon Valley based start-ups Marimba and Backweb, for example, received media attention and investments from venture capital firms for their push technologies.

Marimba's Java-based Castanet technology allows developers to create push channels that run on all types of systems – thanks to Java's widespread hardware and software support. Backweb has push technology tools and applications that simplify the process of creating push channels.

Marimba and Backweb both support another key application for push. This application distributes software programs and updates to users over the Internet or company Intranets.

> The standards battle may take a year or two to resolve

But despite the widespread attention push technologies have received, some companies are trying to distance themselves. Negative connotations have begun to attach themselves to the word 'push'.

"What happened with push technology is that it became over-hyped and didn't deliver as expected. And when that happens, people become irritated. So these days, a lot of push companies are focusing on other applications, most notably, software distribution," says Harry Fenik, vice president of the US market research firm Zona Research.

Pointcast, for example, no longer focuses on providing its own push technologies. It is content to make use of push capabilities found in the two popular web browsers Netscape Navigator and Internet Explorer. It describes itself as a media company, collecting and distributing news.

Eli Barkat, BackWeb CEO, admits that there has been a bit of a backlash against the concept of push, but that this can be seen as a good sign.

"To me, it proves it's a real market," says Mr Barkat. "Part of the reason push is out there is that there is a drive to deliver personalised information, and applications to make people's lives more productive. If push is not implemented in the right way it can create opposite problems in delivering the wrong information to the wrong people and make their lives unproductive."

According to Zona, push technology still has a long way to go before it gains acceptance among the vast majority of Internet users.

Earlier this year, a Zona survey of 113 IT executives at large US companies found that only 12 per cent had adopted push technologies and only 21 per cent had plans to use push for various internal and external services. Of those planning to use push, 65 per cent said they would use the push technologies supported within Internet Explorer 4.0 and Netscape Communicator.

"The interesting thing about the survey was that at the time it as carried out, Explorer 4.0 and Communicator were not available. There was a definite resistance to using proprietary push technologies," says Mr Fenik.

But he has not written-off push technologies. Mr Fenik says that there is tremendous potential in using technologies such as those from Marimba and Backweb for distributing software within an enterprise and updating software – two key problems faced by IT departments.

In many ways, push has always been a part of the Internet. Mr Fenik describes e-mail as the "grand-daddy of push." Most web browsers support e-mail that has live links embedded in the text, allowing recipients to connect to a specific web page without having to download several megabytes of data first, as is the case with push services.

Internet Explorer and Netscape Navigator also support a feature that allows companies to e-mail an entire web page another example of enhancing the push capabilities of e-mail.

Microsoft and Netscape have made it easier for companies to set up push channels by using the technologies built into their web browser products. The two technologies, however, are not compatible. There is work, however, on developing a single standard.

"Netscape has an open standard guarantee that we will always support Internet standards. But the Microsoft push technology is not a ratified standard and so we do not support it," said Charles Vincent, client product manager for Netscape's Paris-based operations.

Mr Fenik says the standards battles between Netscape and Microsoft are part of the 'religious wars', with neither having a technical advantage. It is a battle that may take a year or more to resolve, he says.

Standards battles are unpopular in the Internet community of developers and users because it makes life difficult for everyone to have to support a range of different but similar technologies. The bedrock foundation of the Internet and its huge success has been solely based on the adoption of common standards that eliminate differences between software and hardware systems.

Push is rapidly losing its mantle of hype and must now show that it can support useful applications. Although several key companies are forging ahead with this, push still has a long way to go before it becomes a mainstream Internet technology.

NetGain – new FT guide to online business in 1998

Electronic commerce around the world

NetGain magazine will highlight business opportunities on the Web

English is the *lingua franca* of the Internet, but for Net-based commerce to become a truly universal phenomenon that attracts ordinary consumers around the world – and not just an English-speaking Net-savvy minority – the Web must become multilingual and multicultural.

No more than 10 per cent of the world's population use English to communicate and the remaining 90 per cent have traditionally been poorly served by the IT industry.

This discrimination continues into the Internet age: Internet addresses are limited to the 26 characters of the English alphabet – a big problem for nations with different alphabets – and key technologies are developed first in English and only later if at all translated into other languages.

In NetGain, the FT's glossy magazine devoted to electronic commerce, our correspondent Geoffrey Nairn hopes to show how electronic commerce can become a global phenomenon. Research is now under way – and we welcome further information on interesting examples of how businesses are trading on the Internet around the world, particularly in non-English speaking countries.

Information – no more than 750 words – can be sent in Spanish, Italian, French, Portuguese or English to:
gnairn@europemail.com
with a copy to: *FT.IT@FT.com*
marked for the attention of the editor of NetGain magazine.

☐ This FT guide will also contain case studies of winning web sites in the business world – including profiles of the finalists in the recent FT Business Web Site of the Year Awards.
☐ For an editorial synopsis and details about advertising in NetGain, to be published on April 15, 1998, contact Katherine Morton or Nadine Howarth at the Financial Times:

☐ In London:
Katharine Morton, tel +44 (0) 171 873 3746.
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BUSINESS INFORMATION SERVICES • By Geoffrey Nairn

Golden nuggets on a long and winding road

Getting lost on the information superhighway? Online business information services can provide the shortcuts to show business users where they need to go

The Internet is a gold mine of information, but searching for that elusive nugget often yields *nothing but frustration.*

Online business information services provide better and quicker ways of finding information on the Internet – albeit at a price. And through the Internet, these *companies can reach a* global market of information seekers and offer new products.

Business information has been available online for many years. Initially, access was only via proprietary terminals and private networks, on Reuters and Lexis-Nexis, for example. But the growth of the personal computer has led most services *to move to PC-based access* with a Windows-based interface designed to make searching for information easier.

Many information services use agency distributors, *including big online net*works such as CompuServe, to extend their reach around the globe. But in the Internet age, these traditional delivery channels are costly *and old-fashioned. So provid*ers of business information are adapting their proprietary services to allow access from the web.

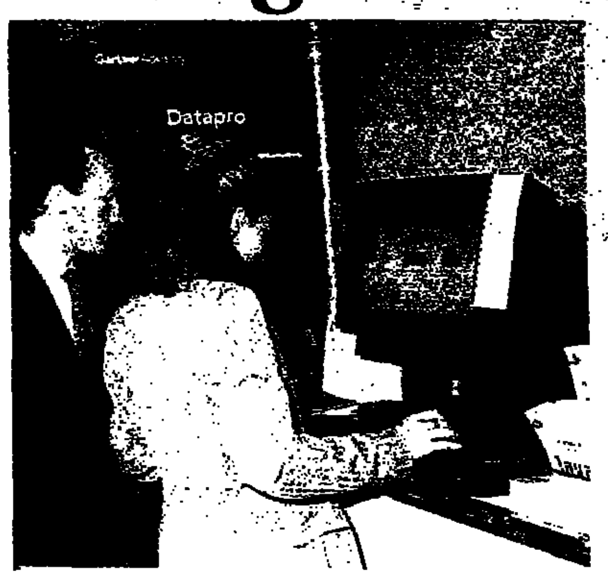
"The Internet allows us to serve our existing market *with new products,"* says Gerard Buckley, marketing director with Dun & Bradstreet, a leading US business information provider. The company opened its global *information database to the* Internet in July.

Web surfers can search free of charge the D&B GlobalSeek database, which has details on more than 45m companies in 200 countries. *They also can buy a synopsis* of the business operations of a particular company. The report is purchased by credit card directly from the web for $5, (£2.95).

D&B's existing contract *subscribers can also buy* reports on the web using the password they use to access the traditional proprietary service.

FT Information, the business information division of *Pearson, publisher of the* Financial Times, recently announced a new Internet-based product: FT Discovery for the Web. It provides users with news alerts and international business information including news, company information and market intelligence. The product is designed to appeal to smaller businesses and is thus offered at a fixed price – £99 a month for each user – and can be accessed using a standard web browser and Internet connection.

Dialog, which claims to be the world's oldest and largest online information service, celebrated its 25th anniversary this year by launching an Internet-based service. Called Dialog Web, *the service is accessed via a* standard web browser using the same command language adopted for the proprietary Dialog service.



Checking online services: delegates at the Gartner's Group European IT symposium in Cannes, southern France

Dialog comprises more than 470 databases from a broad range of disciplines, including business news, patents and trademarks, science and technology, as well as consumer news. It is the flagship product of Dialog Corporation, formed last month from the merger of MAID, a fast-growing UK information provider, and Knight-Ridder Information, the online division of US newspaper publisher Knight-Ridder and previous owner of Dialog.

KRI's information empire comprises more than 900 *databases, 9 terabytes of* data and 160,000 customers. The smaller MAID has 4,700 corporate subscribers – a single subscription may, however, cover hundreds of users. Its core product is Profound, which offers around 100m pages of information from more than 5,000 content publishers, including market research reports, business news, company statistics, brokerage research and stock market prices.

Profound uses MAID's proprietary InfoSort data indexing technology that allows fast, accurate searching across all the databases. The service was launched in 1995, initially just as a dial-up service. But in mid-*1996, MAID added* access via the Internet.

At the end of 1996 an intranet version of Profound was launched that can be custom designed for an organisation at a fixed price and offers *the security advantages of* an intranet. The intranet (a private network) system also uses the InfoSort technology to allow each company to define its information needs and index information in *predetermined* categories. This facility aims to overcome the information overload problem common to online information services, and ensure that only information relevant to the com*pany is provided on its intra*net. British Telecom plans to use the Intranet version of Profound to offer large business customers a complete managed intranet service, including customised infor*mation.*

Financial analysts were surprised when loss-making MAID, whose 1996 sales were just £21m, announced in August its plan to buy the much larger KRI, with revenues last year of almost $290m. KRI's parent Knight-Ridder justified the sale by saying it wanted to focus resources on expanding its newspaper empire.

Online information services have proved a thorn in the side of many media groups because of their heavy up-front development costs. The Internet creates further uncertainty in the online market, and the big *consumer-oriented services,* such as CompuServe, has lost subscribers because of the Internet's growth.

Analysts say business-oriented online services are not as vulnerable because of *their sophisticated search* engines and high-value data. However, much of the bread-and-butter information they offer, such as company results, and magazine and newspaper articles, can often *be found for free on the web.* This is, however, assuming users have the patience to search for it.

The rapid rise of the web browser as a standard, easy-to-use interface has left *online service providers* wondering whether they should continue to sink money into developing and supporting proprietary software.

CompuServe, for example, *announced in October it* would make many of its databases and technical forums available to web surfers on a pay-as-you-go basis, as well as continuing with its traditional proprietary service.

Gerard Buckley, of Dun & Bradstreet, believes proprietary services still have the edge because of the effort that has gone into optimising the software used to access the service. But their longer term future looks less certain.

"There will always be people who will need value-added [proprietary] software, but increasingly we are moving to the Internet," he says.

SEAMLESS CONNECTIONS

Voice, video and data

From Page 5:
Mr Moroney says. Recent *advances in telecommunica*tions technology, including switching, routing and bandwidth capacities, are just now coming into line with the expected growth.

However, for all the rapid developments, a number of substantial hurdles remain. An obvious one is the need for highly scaleable resource management, the infrastructure that manages everything from user authentication to the billing of different customers with different types of accounts and access.

For this, telecommunication companies will have to form relationships with Trusted Third Parties.

Chris Stone, senior vice president for strategy and business development at *Novell, says that his organi*sation is developing products specifically for ISPs and telecommunication companies.

"Offering unified messaging services and the corollary demand on resource management is a huge scale problem. The idea of intelligent administration has been talked about for years but no-one has built really good service infrastructure," he says.

"We have probably the only directory services that can handle the reality now. Though even we don't know for sure because we have never scaled to that size."

However, Mr Moroney of Ovum believes that the issue of TTPs is a complex one that is largely not being addressed. This is because *encryption standards are* involved, and this ultimately lies with the government.

"The Internet society distrusts anything that has to do with governments," Mr Moroney says. "De facto standards have emerged and will appear along the way, but they are inevitably going to be limited solutions."

The final word must go to the insatiable demand for bandwidth. In particular, it is the domestic broadband marketplace that must be cracked if mobile, multimedia technology is to travel its last mile. It seems inevitable that this will come, for what is now beyond doubt is that both vendors and customers desire it.

ELECTRONIC COMMERCE • By Denis Simon in Beijing

Growing opportunities in China

In spite of current constraints, the long-term prospects for electronic commerce are encouraging

China's technology leaders of tomorrow: a special class for highly advanced students at the Science and Technology University in Hefei, southern China *Reuters*

The China 97 Conference on Information Networks and the Internet opened last month in, Beijing. Senior government officials and representatives from the country's Internet service providers (ISPs) announced policies and development plans for the Internet in China.

Also at the conference were executives from the IT industry from other countries, including Donald Heath, president of the Internet Society, and Gary O'Neall, Hewlett Packard's general manager for electronic commerce. They showed their Chinese counterparts global Internet perspectives and applications, as well as electronics commerce, from around the world.

The meeting – the second of its kind since 1995 – signifies the increasing awareness of the Chinese of the importance of Internet developments, and the closer links that are being forged between Chinese policy makers, companies and their peers across the world.

China is determined to increase applications for the Internet, says Lu Xinkui, secretary general of China's steering committee on national information infrastructure.

Despite only six years' experience of working with the Internet, China has four leading public access networks.

These services are ChinaNet, China Golden Bridge Net (China GBN), China Science and Technology Network (CSTNet) and China Education and Research Network (CERNet). The services cover extensive areas of the country. Together with ChinaPAC (packet data), ChinaDDN (X.25), and ChinaFRN (frame relay), they form the national data communication backbone.

Advances in Internet development in China reflect widespread recognition of the value of this 'network of networks'. The first Net access was launched by the China Academy of Sciences (CASNet) in 1991. It expanded into Chinese universities – such as Tsinghua University and Beijing University (CERNet) – and was initially used exclusively for academic research. In 1994, the ministry of posts and telecommunications (MPT) in Beijing began work on the first public Internet access network, ChinaNet. This quickly expanded and included all 32 provinces in China.

In 1995, MPT's rival MEI launched the second national Internet access facility, ChinaGBN, along with its affiliate, Jitong Communications.

At the same time, CASNet broke from CERNet and was formally established as CSTNet. Though both still focus on academia, they also offer commercial Internet access to the public.

Over the next decade, the Internet connection boom continued. Industry-specific networks were established. CEINet was set up under the State Information Center. The CATV network was established under the Ministry of Radio, Film and Television, and XinhuaNet came out under the Xinhua News Agency. All of these have begun to expand their dedicated data communications network into Internet access for the public.

Excitement online: the 'high roller room' at the Shanghai Securities Exchange

Meanwhile, many Chinese private entrepreneurs have tapped into the potential of the Internet. With a common vision that the Net will bring fundamental change to peoples' lives, entrepreneurs have established ISP and ICP operations and are eager to tap into the Internet market.

The 10 leading companies in this area have each invested more than Rmb20m ($2.5m) in building up their Internet and related services. Two examples of private endeavours are the Info Highway in Beijing and China On Line in Shenzhen. Altogether, an estimated Rmb2bn ($250m) has been invested by independent Internet Service Providers and ICPs to install Internet hosts, develop Chinese content, and educate potential subscribers about the Internet. In addition, global companies, such as Prodigy, Alta Vista and CompuServe/AOL, as well as others from the US and Hong Kong have already entered the Chinese market.

Two approaches to the Internet are being undertaken in China – the top-down approach where the government is constructing a nationwide backbone, and the bottom-up method where the Internet is being popularised among the public. This has made the Internet a day-to-day topic of conversation for the average Chinese.

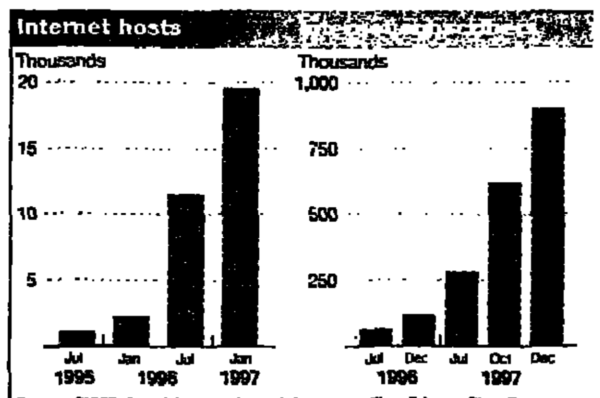
The number of Internet subscribers in China grew at an exceptional rate of more than 400 per cent year-on-year to December *(see chart)*. The development of IT infrastructure in China, and the increasing penetration of home PCs and telephony are supporting the the continued use of the Internet.

China has injected huge amounts of capital into the development of the Chinese version of NII – called Golden Projects – and into regional information hubs on the country's information superhighway. China's investments in the national IT infrastructure are estimated at more than US$40bn. ChinaPAC, ChinaDDN and ChinaNet now cover more than 3,500 cities. National ISDN and frame relay networks are under construction in conjunction with the Golden Bridge Project. ISDN covers more than 20 cities. In the commercial sector, it allows for teleconferences, video on demand (VOD), interactive games, and tele-medicine. ATM-based broadband networks will be in service by the year 2000 in large cities.

China has become the second largest personal computer market in Asia. PC sales reached 2m units in 1996 and will grow to more than 10m units by 2000, including at least 5m units for the home. In other words, about 10 per cent of the urban population will have a PC by the year 2000. PCs in homes in the more developed cities of Beijing, Shanghai, Guangzhou and Shenzhen may grow to 20 to 30 per cent. As China is adding more than 18m main lines of public switching every year – equal to the building of an entire Baby Bell, it is likely that the number of households with telephones will grow from over 30 per cent at present to 70 per cent by 2000.

Advances in IT infrastructure and increasingly diversified and sophisticated individual IT users have brought about an explosion in Internet applications. A recent survey in Shanghai of 200 random users of the Internet covering how perspectives on electronic commerce would change by 1999 revealed that 87 per cent of respondents expected to book hotels and tickets using the Internet, 49 per cent hoped to use VOD at home and 72 per cent would be willing to shop with credit cards on the Internet.

Companies have invested fortunes in Internet systems looking to turn their investments not only into competitive advantages, but also high returns. Many come to realise that providing electronic commerce services is far more attractive than simply connecting individuals for a fee. The same is true for the Chinese government, which views IT and Internet development as an indicator of how well the country is competing globally and how productive it is being locally. This comes in spite of concerns over content controls.



Parallel to traditional electronic commerce practices in China which exist as part of Golden Project initiatives – including IT-enabled ERP, EDI and other automated commercial processes, Internet provides a new model and standard for electronic commerce. Internet-based electronic commerce in China is evolving from publishing and web ads to Internet-based transactions.

Dr Denis Simon, who reads and speaks Mandarin, is director of Andersen Consulting's China Strategy Group which assists leading corporations with their entry and operating strategies in the country

Although still in a primitive stage, a full spectrum of electronic commerce services have gradually come into being. These target personal and business users in China and abroad. Services include: the yellow pages; Iphone/fax delivery; cyberbanking; the online stock exchange; real estate; travel, hotel and ticket bookings; education; sales of books; art galleries; exhibitions, using the Internet as showrooms for products of similar types; newspapers; PC products; sports and leisure goods; online databases, some are pay-per-use; and personal items such as the delivery of cards and flowers.

The PC-industry itself may well be the forerunner of electronic commerce in China. The direct sales approach has proven highly successful for Dell Computer in the U S, whose Internet sales will account for about $1bn this year, or 10 percent of total sales. Chinese PC manufacturers and distributors have started to mimic Dell's example by developing their own version of the build-to-order and consumer direct model.

Cyber-banking is another development which will have far-reaching impact on electronic commerce businesses. The Bank of China now offers several types of services to its customers through the Internet, including on-line credit inquiry, payments and reporting foreign exchange income. Other commercial banks are expected to launch similar services soon. Finally, stock brokering and transactions on the Internet also hold potential. The speculative and opaque Chinese stock exchanges are crowded with both large and small inves-

Continued on page 20

ELECTRONIC COMMERCE • By Alan Stewart

Easier access to world markets

While larger companies tend to have greater success in Internet trading, even small businesses look big – and attract sales – on the Web

The value of worldwide electronic commerce will increase from \$2.6bn in 1996 to more than \$220bn in 2001, according to research company International Data Corporation (IDC). Based on the experiences of its US customers, IDC says it finds that the benefits of electronic commerce is tied to the size of the company.

"With small businesses, trading on the Internet is a bit like being the Wizard of Oz," says Anthony Miller, research manager at IDC.

"You look big and formidable, even though you're not. It gives small firms visibility in markets they wouldn't have a hope of reaching through their existing sales channels."

IDC found that medium-sized businesses with more skills and resources were a little more mature in their use of the technologies, and could try integrating Internet commerce into their full business processes.

"They're using the Net to extend their reach into new markets," says Mr Miller,"and also to shorten the buy cycle."

Large companies were in the best position to exploit the Internet by aiming for some differentiated advantage in the marketplace. "They tend to be doing it either to enhance the way they deal with customers and prospects," explains Mr Miller, "or to reduce overall the cost of business compared to traditional channels."

With industry analysts forecasting spending in the billions, it is no surprise that companies developing electronic storefront software have received large injections of cash. Seattle-based iCat completed a US\$19.2m round of financing in August, with investment led by the Canadian Imperial Bank of Commerce.

European electronic shopping software company Intershop was founded in the former East Germany and now has its headquarters in California's Silicon Valley. Also in August, Deutsche Telekom, Europe's largest telephone company, paid US\$25m to Intershop for the use of its commerce software to set up online shopping malls.

Intershop, which has just opened a UK office, is busy working on virtual reality, live streaming video, and cross-vendor catalogue technology.

"Each reseller can create his own shopping site, but copy catalogues from his wholesaler," explains Wilfried Beeck, CEO of Intershop Europe.

Although 30 per cent of British companies have a Web site – twice the European average – the UK lags behind Sweden and Germany in electronic commerce. "We found this year that 17 per cent of UK companies are buying and selling over the Net," says Mr Miller. The numbers in 1998 were expected to be 40 per cent buying and 30 per cent selling.

"As admirable as that is," Mr Miller says, "Sweden will be 50 per cent both buying and selling by then." The figures predicted for Germany in 1998 were 45 per cent both buying and selling, and for France 30 per cent buying and 40 per cent selling. Currently, about 12 per cent of French and only 7 per cent of German companies have web sites.

In Britain about £70m worth of electronic commerce is carried out over the Internet, according to research done by IDC in the last 18 months. Mr Miller expects this figure to have risen to £2.75bn by the end of 2001, and the current two-year technology gap with the US to have disappeared.

"The value of transactions over the Internet will more than double year-on-year for the next five years and probably longer," says Mr Miller."Most of these transactions are between businesses trading with other businesses. The amount coming from the consumer market is relatively small."

IDC's forecasts and predictions, however, show that by 2001 half of all business conducted on the Internet will be by consumers, with £1.25bn worth in Britain. Mr Miller believes these people are unlikely to be using personal computers. "To get consumer mass-adoption," he declares, "we need devices like the television set."

What are people in the UK buying over the Internet today?

"They're subscribing to magazines and newspapers," says Mr Miller. "They're using paid-for information, including stock market prices and newswire services. They're buying holidays and even gambling over the Internet."

David Aldridge, European general manager of iCat, says that low-end products like books and compact discs are selling, as are food, travel and 'edutainment'. Mr Aldridge highlights the success of computer company Dell, which claims to do £2mn worth of business over the Internet every day.

Huge figures like these are tempting even computer-sceptics. Emma Bridgewater, founder and chairman of Bridgewater Pottery in the UK, is a recent convert to the Internet. "Having been reasonably sceptical about computers," she explains, "I suddenly felt this was such a drearily English attitude to take."

Bridgewater's pottery is sold from exclusive shops like Harvey Nicholls and Harrods in London and Barneys and Bergdorf Goodman in New York, as well as from Bridgewater's own London shop. "It's a painful and laborious process to find retail outlets," says Ms Bridgewater, "and then they take an edited version of the catalogue."

Anthony Miller says Internet trading is all about "reaching markets your existing channels either can't reach at all, or can't reach cost effectively". He also believes electronic commerce is about reducing the cost of communication, whether with partners and suppliers, prospects, or a company's own sales force.

"Have a look at what Internet commerce can do for your business," says Mr Miller, "then take a look at what your competitors are doing, and don'tbe left behind."

Emma Bridgewater will certainly not be left behind. "We're quite early into it ahead of the pack," she says, "and I hope that we'll therefore have an advantage."

Emma Bridgewater, chairman of Bridgewater Pottery: "It's a painful and labourious process to find retail outlets"

Bridgewater Pottery traditionally reached customers via shops such as Harrods. Now the pottery is also selling via the company's web page on the Internet

Magazines are discovering the new medium, but advertisers remain sceptical

ONLINE NEWSPAPERS • By Geoffrey Nairn

A challenge for the printed page

Although there are now more than 2,400 newspapers online, the view is that printed versions will be around for a very long time

For many Americans, the disastrous military involvement in Somalia in 1993 is something they would prefer to forget. But a leading US newspaper, the Philadelphia Inquirer, has chosen to reopen the issue with a ground-breaking 30-part multimedia documentary running on the newspaper's web site.

Called Blackhawk Down, the series is based on a year-long investigation by Mark Bowden, an Inquirer journalist. He had planned to write a series of articles for the paper, but as the project grew, the editors decided a multimedia version on the web would do his work more justice.

Bowden amassed a large collection of material, including more than a thousand pages of classified government documents, video and audio tapes recorded during the fighting, and taped interviews with battle veterans.

"The project just sort of mushroomed," says Jennifer Musser, editor for the newspaper's web site, Philadelphia Online. The editors thus decided to give the Blackhawk Down story the in-depth treatment it deserved. In addition to a month-long series of daily articles in the main paper – in itself an exceptional length for a story – each day's instalment is expanded on the Philadelphia Online web site.

A companion TV documentary will also be shown on Philadelphia's public TV station this month. The web site (*www.phillynews.com/packages/somalia*) carries the text of each day's episode. Also added are photos and graphics not published in the paper, video extracts from the TV documentary and audio clips in which soldiers recount their experiences.

> Newspapers and magazines are looking for ways to exploit their web sites

"We are tight for space in the paper so we would never have been able to go into this depth," says Ms Musser. The site is billed as "the extraordinary, previously untold story of what really happened in Somalia". It is attracting much feedback from web surfers, particularly battle veterans, who can put questions to Mr Bowden via an online message board. Links to other relevant web sites are included, such as veterans' home pages or sites about Somalia. Blackhawk Down – named after the two Blackhawk attack helicopters shot down in the battle – is by far the newspaper's most ambitious project on its web site since its launch in 1995.

"It has been a lot of work, but it really brings the story to life," says Ms Musser.

Although the Philadelphia Online project is unusual, many newspapers are looking at ways to exploit the full potential of their web site. This can be a way to stand out in an increasingly crowded market.

At the beginning of 1997, there were 1,600 newspapers online, according to the US

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STREAMING MULTIMEDIA • By Christopher Price

Coming soon: the magic of the moving image

In the future, a spin on the Internet could be as moving as a trip to the cinema

The days of viewing still images and reading page upon page of pure text on the Internet are looking increasingly numbered.

New developments in the fields of "streaming" multimedia – including real-time video – are being embraced by web site authors at a pace which is likely to transform how information is displayed on the Internet.

Among those to announce new developments in the multimedia market is Geo Interactive Media, an Israeli-based company. It has recently introduced its first product which allows website developers to offer real-time video and audio.

The uptake to the group's Emblaze products has been impressive. In the seven weeks since it began marketing the products in the US, the company has earned revenue of $1.5m, while some 1,200 sites have installed the enabling software.

Streaming is a process where still images are run together quickly to give the impression of video. It has been on the Internet for some time. Prominent in its development have been companies such as Real Networks, Narrative Communications, FutureWave, Macromedia and Lari Software.

The one problem all the companies have faced is compression – how to get the amount of data needed to run the video images on a standard capacity (normally 28 Kbps) cable modem.

Geo claims to have solved the problem with Emblaze, which allows a compression rate of up to one to 1,000.

Its range of products claim to offer a range of multimedia applications, including video, audio, animation and interactive content.

In addition to its high-data compression, Emblaze is available as a Java applet, thus allowing any Internet user access regardless of their hardware or software configuration.

When the web site visitor clicks on Emblazed content, the applet is quickly and transparently downloaded on to the visitor's computer where it acts as a "player". It immediately decodes and decompresses the incoming file to produce an exclusively Java-enabled multimedia experience.

"We believe we are at least 18 months ahead of the competition," says Eli Reifman, Geo's vice-president of technology development.

"In particular, Emblaze's application on a 28 Kbps we believe offers true interactivity for millions of ordinary Internet users."

Reifman also points to the simplicity in the way Emblaze is structured.

Unlike many other streaming products, Emblaze does not need to be downloaded, nor does it need any special server software.

Among the sites to have installed Emblaze is the one for Megadeath, the US rock band. The site allows the group to be seen and heard by the web site visitor.

However, Reifman sees other more mundane applications for the product. Retailing at $295, the software can be installed in minutes and is being marketed to the estimated two million home web sites in the US.

Noah Friedman, an analyst with Panmure Gordon, the London-based stockbroker, says that the problem of putting multimedia applications on the web has been that many have been adopted from CD-Roms.

Many multimedia activities have thus only been made possible by plug-ins and expensive, complicated server software.

"Research has shown that 90 per cent of visitors to a web site that require downloading or other requirements to engage in multimedia activities will move on," says Mr Friedman.

Other applications under development by Geo include interactive e-mail.

This promises greater capacity ability due to the compression technology, with the result that files would be minimised. In addition, full multimedia graphics, animation and sound would be available.

Geo has also signed a deal with McGrawHill to develop applications for the educational market. In addition, the group is developing Emblaze technology for live broadcasting.

Not that Geo has the multimedia market to itself. The company is a late entrant to a sector which has been developing rapidly and catching the eye of some of the Internet's leading companies.

Microsoft, for example, rescently bought VXtreme and took a small stake in Real Networks. Narrative has several products based on Macromedia's Director. Both companies are working to overcome the need to use plug-ins and additional server software.

Director is among the most popular multimedia authoring tool for CD-Roms. Its Shockwave software allows users to take material from this base and adapt it for a web site.

Macromedia recently announced it was planning to develop Director around Java. If successful, the development could have a significant impact on the multimedia Internet market.

FutureWave's FutureSplash already uses Java as does PowerProduction's WebBurst, but both are said to suffer from a lack of compression. Elsewhere, OLiVR Corporation has developed a streaming product which is available as a Netscape plug-in.

Lari Software has introduced its Electrifier and LighteningDraw Electric, another streaming tool developed for MacOs.

The pace of activity in the market looks to increase the likelihood of finding solutions quickly. Analysts predict closer alliances between the developers, and even a bout of takeovers, as competition heats up.

"The most significant risk to Geo must come from Macromedia acquiring or doing some kind of deal with one of the other streaming companies, particularly Narrative, which has already launched a streaming product and claims to be able to convert material created in Director," says Panmure Gordon in a research note on the market.

"If this were to happen," says an IT analyst at another London-based broker, "Geo's claim to an 18-month market lead could be quickly eaten up."

CASE STUDY: INNOVATION IN NORTH WALES • By George Black

Search for venture capital

While US venture capitalists are rushing to invest in Internet-related companies, some UK Internet entrepreneurs are struggling to find backers.

Anchor Computer Systems is an example. The company, which has developed an innovative system for car dealers and car finance firms, claims that venture capitalists are showing no interest in a proposition promising a 25-30 per cent return on investment in three years.

"The main reason for this is apparently that we have been asking for too little," says Bobby Williams, Anchor's technical director.

The company, which has an annual turnover of about £600,000, has asked for an injection of only £500,000 to £1.2m to market the system. But venture capitalists have told it they do not want to lend less than £5m.

Mr Williams claims that Anchor could easily meet the investor's target and might well make £500,000 pre-tax profit after three years. The investor could then realise its profit through a trade sale or flotation. The Anglesey-based company, which has been developing motor trade and finance systems since the early 1970s, decided in 1994 to expand the business by adopting Internet technology.

The car dealer systems market, a slow-moving one with only a limited degree of competition, had not at that time appreciated the potential of the Internet.

Anchor was strong at the lower end of both the dealer and finance systems sectors, but these businesses offered only very modest growth prospects unless a radically new type of system could be invented.

So Anchor developed a Virtual Showroom, which allows buyers to find a second-hand car at any dealership linked to the network. The Internet site has proved popular with the public – searching is much easier on the site than scouring small advertisements in newspapers and magazines.

But Anchor has made little out of it so far. In order to make the site a success, Anchor has given away three-quarters of the equity in the system through a joint venture with UUNet Pipex, a leading Internet service provider, and Kalamazoo, the leading UK supplier of motor trade systems.

UUNet Pipex was keen on the joint venture because it provided one of the first working examples of how the Internet could add value to a traditional business. For Kalamazoo, the Virtual Showroom was attractive because the site could interface smoothly with its existing dealer systems.

For Anchor, there was the prestige of being a year ahead of the market. This brought the company to the attention of several leading motor trade companies and finance business and led to a modest increase in revenue. But the reward for Anchor was hardly commensurate with the effort which had been put in – and the next step required a much bigger investment.

Anchor was not keen, therefore, to repeat the joint venture process with its other Internet product, the Dealer Showroom. This is essentially an intranet for dealers, and has a part-exchange calculator and a loan finance calculator. Other applications are included that could make it as successful as the Virtual Showroom.

Instead of another joint venture, Anchor's managers decided to try to raise capital for a marketing campaign and to build up larger sales and service operations.

"We have had a good relationship with our bank, but they did not understand our market and were not interested in investing," says Mr Williams. "After we presented our strategic review to them all we got was an offer of an increased overdraft."

When Anchor turned to the venture capital market to try to find an investor to take 25 per cent of the shares in the enterprise, the response was disappointing, says Mr Williams (email: bobby@excession.anchor.co.uk).

Fund managers were sympathetic, but they were mainly interested in the company's historical growth, which had been depressed by high spending on research and development.

Continued on page 10

ONLINE NEWSPAPERS

The latest news on the Internet

From facing page:

trade magazine Editor & Publisher. Last month, the figure had shot up to more than 2,400. Web sites are no longer limited to the big national newspapers. Smaller local newspapers are also discovering the advantages. Web sites allow local papers to reach lost readers, people who have moved away from their home town, for example. One local paper new to the web is the Hampstead & Highgate Express, a weekly that circulates in north London. The Ham&High Network was launched in September, and the online content mirrors that of the newspaper. But the publisher wants to go further.

"We hope to be able to offer many more enhanced news and entertainment services that this digital medium allows," says Doug Bonn, regional managing director of Home Counties Newspapers, the publisher.

Deciding what those enhanced services should be is a big challenge for online newspapers, particularly as few have a clear idea who is reading their web site. Many online papers thus require users to register so they can discover how many digital readers they have and gather demographic information.

The Financial Times, for example, has more than 550,000 registered users of its free web site, and a quarter of a million pages are looked at each day. Other papers prefer to let readers enter their web site anonymously.

"We do not make people register but we try to entice the information out of them," says Nancy Malitz general director for the Detroit News Internet site, which has been online since 1995. A few online papers charge a subscription. The Wall Street Journal is perhaps best known and charges $49 a year.

"We do not think we can charge for the general newspaper," says Ms Malitz. The Detroit News initially planned to offer its content via a commercial online service for about $5 a month. "But with the arrival of the Internet we just watched that business model disappear," says Ms Malitz.

The San Jose Mercury – dubbed the newspaper of Silicon Valley – offers the content of the past week's issues for free on its site but charges for older articles. Its database of articles covers its own news and that of sister newspapers in the Knight-Ridder empire and stretches back over 12 years. To read these past articles, users must subscribe and pay $1 for each story.

One of the biggest problems for online newspapers is getting advertisers to commit to the new medium. Advertisers see the Internet as the ultimate "precision marketing" tool and want detailed reports of who visits a site and how many click on their banner ad. But the technology to do this is still immature.

Methods for measuring TV audiences or newspaper circulations do not translate well to the web. Every new development in electronic media is a challenge to newspaper publishing, and the Internet is perhaps the most serious threat yet. However, newspapers have been quick to adapt to the Internet age, and most believe their web sites will supplement rather than supplant the traditional newspaper. "The newspaper is going to be around for a very long time," says Ms Malitz.

EMPLOYMENT • By Geoffrey Wheelwright

Save time by job hunting online

Online recruiting is becoming the fastest way to find employees, and new jobs

Looking for a job? You could do a lot worse than to look on the World Wide Web. It appears to be the fastest growing recruitment and job-finding resource around – particularly in north America.

Naturally, the sector most well served by an Internet-based job search and recruitment services is the high technology industry. Thousands of jobs are advertised for work in computer hardware and software and telecommunications companies. Not only do these companies carry recruitment advertising on their Web sites, but they are also increasingly using Internet-based recruitment and placement services to find the right people. Company websites are also a good resource for the prospective employee; the sites provide vast amounts of background corporate information.

US-based IntelliMatch (*www.intellimatch.com*) started its site for matching job seekers and employers on the Internet in 1994. The company now employs 40 people, provides services to more than 100 high technology and corporate customers and claims that more than 10,000 users visit its site daily.

Like most successful recruitment web sites, IntelliMatch aims to match jobs to job seekers. It does this by getting as much information as it can from job seekers and employers.

This is done using a large database with an aim to yield the maximum possible match between employer and prospective employee.

Job seekers can put their resumes online at a service like IntelliMatch for free. IntelliMatch – and many of its competitors – typically make their money by charging employers for posting jobs on its database and for helping to match these postings to job seekers it has listed in its database.

The potential of this kind of service, particularly for job seekers, is huge. A recent survey by Interbiznet, a human resources organisation (*www.interbiznet.com/hrstart.html*), revealed that the number of companies with job listings on the Web has grown to 4,000 web sites.

The challenge for both job seekers and employers now appears to lie in finding the best possible match. Job seekers do not want to waste time applying for jobs for which they are not qualified, while employers do not want to be presented with lists of prospective employees that are not likely to fit their needs.

Challenges

Ottawa-based CareerBridge (*www.careerbridge.com*) is an online recruitment service. According to Chad Morissette, director of North American business development, there are two challenges inherent in the online job seeking process. One is to allow applicants to post their resumes online and review a host of job postings aimed specifically at their area of expertise, But it is also important to have employers post and revise positions on a daily basis and conduct "e-mail interviews" to screen qualified candidates quickly and easily.

CareerBridge has been successful at convincing Canadian high technology companies of the merits of this approach. It counts Corel Corporation, Northern Telecom, Lockheed Martin Canada, and AIT Corporation among its customers.

CareerBridge claims that some corporations are filling as many as one out of three new positions through online recruiting.

Mr Morissette says the big attraction for many customers is that the process is both quick and highly specific.

"We expedite the entire recruiting process for the recruiter," he explains. "We bring candidates and corporations together and offer an online interviewing experience where corporations can screen and qualify candidates. And they do all these things ahead of [a face-to-face interview]. They don't have to do it by fax and by looking at paper resumes."

CareerBridge has concentrated solely on the high technology industry. This sector is already a strong user of the Internet and a place where both employers and job seekers would expect to be able to connect.

Cost-savings

Mr Morisette says, however, that it is not just about building big databases. He says that when its database pulls up a list of job seekers for a given position, CareerBridge looks at them and applies "human filters" to make sure they are really appropriate to recommend to the employer.

"The entire value proposition is speed and it provides significant cost-savings," Mr Morissette says.

CareerBridge has been in business for 17 months, and over the past half year has found demand rising steeply for what Mr Morissette calls "e-cruitment" and that the speed of job fulfilment varies widely depending on the job being offered and how well-known the company is.

In fact, he suggests the biggest challenge lies in getting the right job candidates to visit the CareerBridge site – not in getting blue-chip companies to post their positions.

"What candidates are looking for is as much information as possible," says Mr Morissette. "This provides them with a way of doing so – and its all part of the package. We also do lots of Internet advertising – with 'banner advertising' on some sites, in newsgroups and so on."

Mr Morissette says that CareerBridge's 75 corporate customers are not only using the site to find engineers and programmers, they are also finding staff from administrative assistants to marketing experts.

"The big thing is that if offers access to the 'hidden job market' – there are jobs that it would have traditionally been difficult to find out about," he adds.

The final issue for many employers in using all forms of Internet-based recruitment is that it is "geography-neutral". In other words, by listing jobs on a Web site, you automatically open them up to prospects all over the world in a way that it either difficult or very expensive to do in any other medium. Particularly in high technology, where it is easier to make a case for work-related visas for qualified individuals, the ability to reach a global pool of job seekers can be a real attraction.

Venture capital

From previous page:

"We have never made a loss, but because we have prudently written off our software development instead of capitalising it, as many do, our growth has been lacklustre so far," says Mr Williams. "But that does not mean the prospects are not good. The difficulty is in persuading investors to back us on this basis."

Venture capitalists have said they would consider investing in the company solely on its future potential. But to do so, they say, they would want to increase their share of the equity without injecting more capital if the business did not perform as well as expected.

This could prove the stumbling block; but Anchor is still trying to negotiate a deal.

□ *Herman Hauser, founder of the personal computer manufacturer Acorn, recently warned that the UK could miss the chance to increase its role in the global information technology business because of a lack of venture capital. More investment funds were needed to support the marketing of new technology products, he says.*

Space link: London children at Sulivan Primary School check their e-mail from NASA and space station Mir.

US DEVELOPMENTS • By Tom Foremski

'Net Days' help to boost online education

There is a long way to go before US students gain the best benefits from the Web

Over the last two years, there has been a large increase in the number of US schools that have connected at least some computers to the Internet. However, these schools have a long way to go in making good use of the Net in the classroom.

More schools are wired to the Internet thanks in part to John Cage, a senior executive at US computer company Sun Microsystems. Mr Cage conceived the idea of Net Day – a day when volunteers are encouraged to converge on local schools and help wire classrooms to a central hub so as to assist in the hooking up of the Internet.

High technology companies have been involved in Net Days across the US, volunteering staff and equipment.

The project also received support from the White House – president Bill Clinton, and Al Gore, the vice president, promoted the idea. The two used the opportunity for a photo shoot, donning hard hats and carrying rolls of telephone wire at a local school.

There have now been three national Net Days, in October 1997 and in April and October of this year.

The first Net Day helped to wire about 4,000 schools and involved more than 100,000 volunteers. The latest Net Day, however, showed a loss of momentum. Fewer volunteers showed up and some leading corporate sponsors dropped out.

The wiring of schools is only part of the process. Many schools now have wiring in place but are waiting for funds to complete the job.

The Telecommunications Act, passed last year, includes the E-Rate program which will make available \$2.25bn to help connect more schools to the Internet.

Net Day and government funding such as E-Rate focus on increasing the number of computers in the classroom and connecting them to the Internet. The implication is that this increase will further the quality of education.

There is a growing realisation that throwing technology into the classroom is not the answer. Unless teachers receive the training and support they need to make the most of the technology, the rest is a waste of time and money. According to a survey earlier this year, 5 per cent of US schools that *are* wired to the Internet have not made it available to students in any way.

More than 43 per cent offer just one personal computer connected to the Internet in a central media centre. Obviously, the Internet is still far from being a key educational tool.

These low rates of Internet use are partly a result of unequal investment in computer technologies by US states and the lack of teacher training.

A recent survey by the US publication *Education Week*, found that various US states spend between 3 and 15 per cent of their educational budgets on teacher training. Educational experts recommend at least a 30 per cent level.

As many businesses know, supplying staff with computers and an Internet connection also requires good technical support.

When teachers run into problems with PCs and networks, they are often forced to abandon them until they can find the time, or acquire the skills, to fix common problems.

The *Education Week* survey also found that teachers in California, New York and Massachusetts – states known for their buoyant high tech industries – have some of the nation's lowest percentages of teachers trained to use computers and the Internet, and the lowest numbers of computers in classrooms.

Some Silicon Valley companies in California have announced teacher training grants to schools and offer free and/or low-priced equipment.

Chipmaker National Semiconductor, for example, recently announced a three year grant programme of \$2.5m to help train teachers and provide them with the support they need.

"Our goal is to reach as many educators as possible, as quickly as possible, with the information, tools and resources they need to harness the power of the Internet, and use it in the classroom," says Brian Halla, chief executive of National Semiconductor.

California is ranked 45 out of 50 states in terms of number of computers in the classroom. Peter Wilson, California's governor, announced in October a \$1bn four-year programme to help train teachers and buy more computers.

In spite of California's low national ranking there are some bright spots. IBM is involved in a showcase project dubbed the New Technology High School. Located in California's wine growing region of Napa Valley, an old elementary school has been refurbished to look like a Silicon Valley start-up company, with glass partitioned classrooms and students using the latest IBM computers and networking technologies.

The idea is to provide about 200 students with the same tools they would use in a business environment. Because IBM is the lead sponsor, students learn to use the IBM Notes groupware application.

Teachers at the school report that e-mail from students allows them to deal with many questions in a shorter time, and administrative tasks such as recording absences are dealt with more quickly.

"Without Notes, I could have spent the whole day in meetings with 20 students even though all their issues could easily be resolved electronically," says Robert Nolan, school director. "Now, when we meet face to face, it's about important issues."

Teachers at the school also report that the technology enables them to spend more time with students, developing closer relationships.

The New Technology High School offers other schools valuable lessons on the best ways to use technologies.

But such showcase projects bear little resemblance to the realities of daily life at many US schools. Just as access to computer technologies in the home is divided along socioeconomic lines, such can be said for schools.

And increasing the amount of computer technologies in the class room will do little to solve fundamental educational problems.

EUROPEAN DEVELOPMENTS • By Alan Stewart

Hungarians set the pace

Netd@ys Europe, launched in early 1997, aims to create web-savvy school children

At the beginning of 1997 the European Commission launched Netd@ys Europe, inspired by a similar US initiative in 1996. The European programme is designed to raise awareness and stimulate national initiatives. The first set of European Netd@ys ran from 18-25 October 1997.

Cisco Systems' Mike McKeown, a member of the Netd@ys Europe committee, describes how Jacques Chirac, the commission president, is committed to putting all of France's 55,000 schools on to the Internet by the year 2000.

"French secondary schools are being connected in large projects by regional education authorities," says Mr McKeown, "so NetDay activities in France are more focused on primary schools."

Germany's *Schulen ans Netz* programme has come in for criticism from Hans-Olaf Henkel, president of the Bundesverband der Deutschen Industrie (Confederation of German Industry), for its modest aim of putting a mere 25 per cent of the country's 59,000 schools on to the Internet by the year 2000. Other countries such as Switzerland intend to connect all their schools by that time.

Italy's approach is different. "A government-funded project is networking 10,000 of its schools, although initially for administrative purposes," explains Mr McKeown. The Spanish programme, like that in the US, is mainly about providing the physical infrastructure to link schools to the Internet.

Most of Sweden's schools, on the other hand, already have at least one computer connected to the Internet and are now moving to networked connections.

Although most countries in Eastern Europe are still at the planning stage, a very noticeable exception is Hungary. Mr McKeown describes how all 1,200 Hungarian secondary schools are being connected up in a large managed network due for completion by Spring 1998. "Hungary will probably be the best-equipped country in the whole of Europe," he predicts.

Every school will be networked, with a minimum of eight computers each. "Hungary sees this as fundamental to its long-term economic competitiveness," says Mr McKeown. "The Hungarian government believes the country can attract more investment with an appropriately skilled and educated workforce."

UK's 'NetYear' to begin in January

In Britain, Tony Blair, the prime minister, will launch UK NetYear in the new year. NetYear will be an initiative to help connect all Britain's schools to the Internet. Mr Blair had said at the Labour Party conference at the end of September that he wanted to make Britain the best educated country in the world.

UK NetYear's founders are Sun Microsystems and Cisco Systems, who were behind similar NetDay schemes in the US, together with ICL, the computer company, and Telegraph newspapers. The four companies have underwritten a budget of about £2m.

"The underlying concept of NetYear is to galvanise business and community to raise money to improve the infrastructure in schools," explains ICL's Alan Teece, a member of NetYear's operations team.

The project's objectives will be to raise £10m, and connect up 10,000 of the 26,000 UK schools not already on the Internet.

Early in October the prime minister announced funding of £100m for schools. The money is intended to provide the latest technology to make the most of the government's National Grid for Learning (NGfL), an Internet-based network of varied educational materials.

Mr Teece reveals that Mr Blair's £100m is really only £50m of government money. The rest the schools will have to match with an equal amount. UK NetYear will hope to provide this match funding for schools, and also direct funding for disadvantaged, rural, and small schools.

When they register for NetYear, schools will receive a comprehensive guide and a training CD-Rom including a number of educationally related Web sites. Schools will therefore be able to try out the Internet for teaching and learning purposes without first having to be online.

NetYear is underpinned by a five-step model. "At level one, you have a single PC with a dial-up Internet account," explains Mr Teece. "At level two, a network around your school, so you can share resources, and at level three an intranet, using Internet technologies inside the school."

Level four sees schools using the Internet itself as a resource for teaching and learning. And level five includes community access for parents, homework clubs and teachers. Schools are being asked to assess where they are on the model now, and where they would like to be as a result of NetYear. The schools have to assess

Turn to facing page

FT IT

Education in an Internet Age

Here and on the following page, FT writers look advances in online education

School links up with space station Mir

When a parent casually remarked to the head teacher at her son's school that the boy's godfather was an astronaut, the head teacher was intrigued.

But when the parent also added that the man in space – Dr Mike Foale, the British-born space shuttle astronaut – was then spending more than four months aboard the Russian space station, Mir, and that he was keen to use e-mail as a way to keep in touch with those back on earth – then the head teacher, Tim Rome, saw a great educational opportunity.

Why not, he thought, get Mike Foale's godson – Adam Fazakerley – and other pupils to produce questions which could then be sent to Mir, via the Internet?

The questions would go to Nasa and then be beamed into space. Answers would travel back by the same route.

Tim Rome is head teacher of Sulivan Primary School, in Fulham, south-west London. The school has nine full-time staff and 275 pupils, aged from three to 11. The pupils come from a wide range of backgrounds, and IT plays a key role in the school – pupils can use a growing CD-Rom library, and the teachers enter their pupils' records directly on to a computer network. The school also uses an electronic registration system.

To make the space link possible, Sulivan school was provided with a multimedia computer that could access the Internet and British Telecom's 'CampusWorld' educational online services.

Small groups of children aged eight to 10 used the Internet as part of the space project. They explored Nasa's home page, downloaded images from the Hubble space telescope, watched live video clips sent directly from inside Mir, and from the Nasa control room.

Safe return

Large amounts of information were collected about the space shuttle and the role of Mike Foale – who returned safely to earth in September.

Pupils (pictured above) had received daily updates about life on board Mir. Much of this was printed out and shared with the entire class. "It really captured the children's imagination," says Mr Rome.

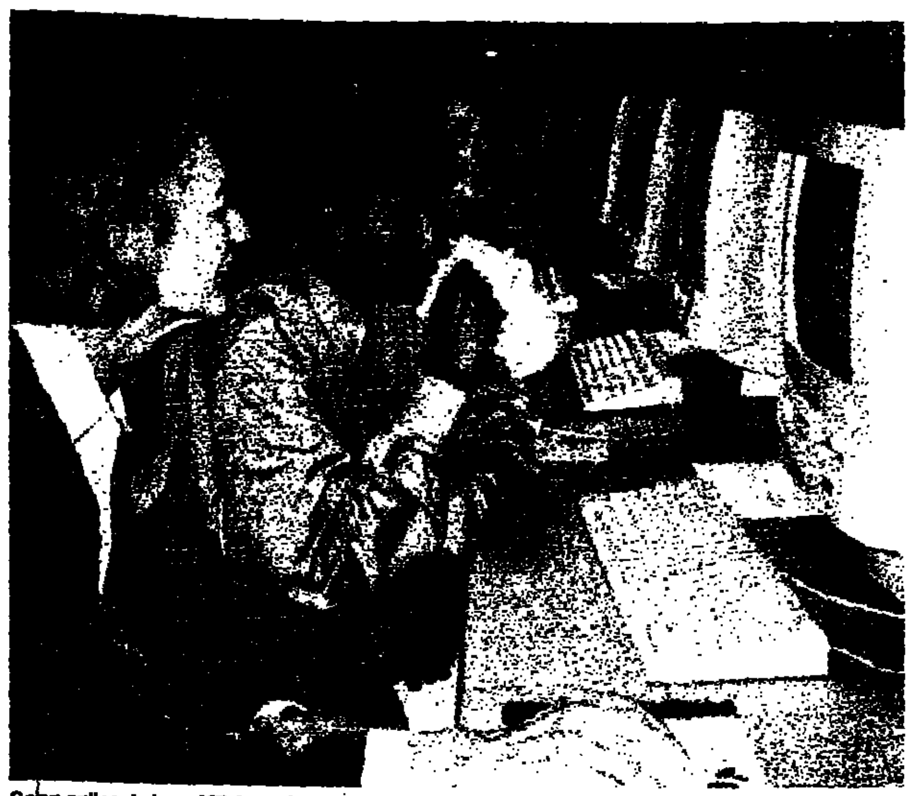
Meanwhile, other groups of children have been using the Internet for a project on the ancient Egyptians – and have even taken a 'virtual tour' around the Cairo Museum web site, exploring galleries and studying artefacts.

CampusWorld has also proved useful in enabling various schools to keep in touch with each other, says Mr Rome. "You can get information about projects that other schools are doing, and this has allowed us to share our experiences.

"Teachers can also use the system for lesson planning and developing courses," he adds.

"With facilities like these, we're nor restricted to the school perimeters. We can go anywhere in the world – not to mention a space station circling thousands of miles above the earth."

Michael Wiltshire



Going online: Labour MP Anne Campbell with children at Netherhall School, Cambridge

INDUSTRY SUPPORT • By Christopher Price

BT, Oftel and Bill Gates to help put UK schools online

Companies are supporting the NetYear launch. But is the plan really viable?

The promise by Tony Blair, the UK prime minister, to connect every school to the Internet by 2002 won widespread support – but raised some eyebrows as to how the target would be achieved within five years.

Despite the prime minister's pledge of £100m to the project, critics pointed to the fact that only 6,000 of the country's 33,000 schools are currently connected.

Nevetherless, an impressive array of industry support was mustered to give the proposals a high-profile launch.

Among these, Oftel, the telecommunications watchdog, said it agreed with British Telecommunications to offer schools high-capacity internet access for £790 per year, with free connection. This would give schools 10 hours of connection per school day, up from the previous modest three hours a day. BT will also offer unlimited phone access to the Net for £445 a year.

Others enlisted for support included, Bill Gates, the billionaire chairman of Microsoft, who said he would be an adviser to the internet schools project.

In addition, some £120m in national lottery cash has been ear-marked to train the 500,000 teachers in the necessary high-technology skills required to implement the five-year plan. By 2002, about 75 per cent of teachers and 50 per cent of pupils should be able to use their own e-mail addresses.

Another development has been the decision by Chris Smith, the heritage secretary to plough £750m into connecting libraries by 2002. The bulk of the pounds investment will go towards the development of network infrastructure.

Spread over seven years, this includes £192m for the purchase of computer hardware, such as terminals and printers.

The cost of setting up a public library network is estimated at £172m, while a further £228m is recommended for the set up and upgrade of local IT networks.

The basis of the schools project is to create a National Grid For Learning. Some envisage this taking the shape of a mini-Internet for the country's educational establishment. This would be a network linking Britain's 33,000 schools, 500 colleges, 360 other educational institutions, and 4,500 public libraries.

However, the government's advisory paper on the NGL talks of a "mosaic of interconnecting networks", rather than a dedicated system. A prototype grid is due to be set up within the next 12 months.

The nucleus of the grid will be a "virtual teacher centre" housing the latest thinking on teaching methods, facilitating links with leading web sites and providing space for online discussions by teachers and school administrators.

Microsoft has agreed to work with BT and RM, the leading supplier of information technology to British schools, to design a centre in consultation with government.

The first stage of NGL will be officially launched in the new year with UK NetYear, a 12-month industry initiative aimed at helping the government meet its Internet target. (*See report on facing page.*)

"This is the first wave of national activity which we believe will result in 50 per cent of schools being connected to the net by the end of the UK NetYear's programme," says David Wimpress, chairman of UK NetYear and managing director of ICL's education and consumer division.

He adds that "teachers by and large are not IT-literate", so the project will also aim to train a "very substantial number of teachers in using the internet as a teaching resource".

But with a budget of just £2m, put up by sponsors ICL, BT, Cisco, Sun Microsystems and the Telegraph Group, UK NetYear must seek other contributors if it is to hit its ambitious targets.

Indeed, it is not just the connection and the cost of running Internet services that cause concerns among some in the cash-strapped education services. It is also the cost of buying computers and other associated equipment.

"Financing is potentially a big barrier," admits Mr Wimpress. But he says that making teachers and pupils aware of the value of the Internet even on a small scale would be "enormously beneficial".

UK NetYear sponsors are paying for the first CDRom teaching pack, which will be issued this year. Funding for an advanced teaching programme and other curriculum activities is being sought.

Mr Wimpress said he was "cautiously optimistic" that the programme would hit its targets.

He believes the momentum for change that has developed will be key to this. "The last six months have seen an evolution turn into a revolution – the activity has been quite breathtaking. Before we had pilot programmes which were quite valuable, but now we have a government which is serious about what it wants to do in the educational arena – and is putting some resources behind it."

EUROPEAN DEVELOPMENTS

Teachers lack IT skills

From facing page:

the cost of achieving that step, put a plan in place, and start raising money.

"Hopefully, by the first NetDay in June 1998, they'll have achieved that," says Mr Teece, "and NetDay itself will be a celebration of what's happened."

NetDay two will be in October 1998, in line with the European Union's NetD@ys programme. UK NetYear will continue until it has achieved its objectives, with ICL having already underwritten three years of funding.

But will the government hijack NetYear? "We always wanted it to be seen as part of their initiatives," responds Mr Teece. "The government sees this as fitting in perfectly with both the National Grid for Learning and also teacher training."

The Teacher Training Agency plans to retrain all 450,000 teachers in the use of IT, starting in 1999. Between £150m and £200m from the Lottery New Opportunities Fund has been allocated for this purpose.

The telecommunications regulator Oftel recently gave the go-ahead to British Telecom's charging proposals for connecting schools to the Internet. Cable companies are charging schools £600 a year for an ISDN connection together with Internet access, while BT's offer is £790 a year for ISDN with no Internet access.

A networked Internet connection over ISDN costs around £2,500 a year, points out Mr Teece, making the real cost of a BT connection about £3,300 a year. Little wonder that Oftel found BT's offer was not anti-competitive. The Teachers Training Agency is about to publish a new curriculum, which will take effect from September 1998.

"People graduating in teaching qualifications will have to be competent in IT in the classroom," says Mr Teece. "At the moment teachers have often had only half a day of IT training."

The jigsaw

But is the government doing as much as it should be?

"In contrast to the last government, it is doing a lot," says Mr Teece. "To put the pieces of the jigsaw together, you've got schools and the National Grid for Learning. Then there's further education and the Government's Lifelong Learning white paper."

The Dearing review and the government's proposed University for Industry will impact further and higher education, which will compete for the chance to provide the UFI, as will the Open University. There are also forthcoming library initiatives and teacher training. The big missing links are qualifications and inspection standards.

"When it comes to IT, most inspectors don't know what they're inspecting," maintains Mr Teece.

"If IT doesn't add any value in terms of the qualifications and standards process, there'll be no incentive for schools to use it, rather the reverse."

The challenge for government is to avoid a host of replications, says Mr Teece. He believes that with co-ordination and an overall project plan, the various initiatives could become a successful national strategy.

Perhaps then Britain's education system really could become the "beacon to the world" that Mr Blair aspired to in his conference speech.

PIONEER PROJECTS • By Michael Wiltshire

Fast track to online learning

Network terminals for schools, libraries and universities also link up with homes in the wider community

A Cambridge secondary school, with 1,450 pupils, has launched a model in the UK for online learning in the home, school and extended community.

Netherhall School is seen as the flagship for online education in the UK. Netherhall has been working for 18 months on the blueprint for its online programme, developing the tools and communication infrastructure to promote greater use of IT in the school and local homes.

Central to the project is the adoption of low-cost network-orientated computers (NoCs), a type of network computer (NC) which has wider applications than an ordinary NC.

The Cambridge-based company, DOT Matrix is supplying the 'DOT' system, a plug-in-and-play set-top box to the Netherhall programme, providing access to Internet and intranet services.

Ken Hunter, headmaster of Netherhall School, believes that "schools at the leading edge of IT must 'make real' the vision of providing education community-wide. We have made this happen."

Alistair Wells, head of IT at the school – and the architect of the online model – says DOT terminals offer "an exciting future for information access ... and giving access to resources in the home is key to online learning. The home is where students and parents have time for research that is not available in school."

Among the features of the NoC is a secure electronic cash system. These terminals will also be offered to parents of pupils at the school. The in-school equipment is funded through industry, and will be available to home-users at low cost.

Since October, the school's web site (*www.netherhall.cambs.sch.uk*), has been receiving more than 5,000 'hits' a week. The school has also taken part in the European Union's 'Socrates' mailbox project for the past 18 months, which explores the use of electronic mail in education.

DOT Matrix is expected to announce an innovative finance scheme for the system in the next few weeks. The scheme also allows schools to develop revenue streams via the DOT terminals, based on the system's smartcard capabilities.

IT-related educational developments by Netherhall School include:

- Online work experience.
- Direct links to high quality curriculum content on the Internet.
- Smartcard protection from undesirable sites, as well as control for parents over the level of access to the Internet.
- Curriculum resources for online learning.
- Access to the Net for all pupils in school and via low-cost hardware in the home.
- The involvement of local homes with online learning by encouraging the involvement of parents with special skills and expertise.
- The integration of local schools covering a wide age-range from primary to sixth form.

Professor Stephen Molyneux of the University of Wolverhampton: the driving force behind the Broadnet online project

University for Industry

Network-oriented terminals from DOT Matrix have also been selected as the low-cost delivery system for Broadnet – an initiative led by the University of Wolverhampton, the UK's third-largest university, to deliver 'distance learning' in the Midlands.

The trial, which has a strategic link with a Birmingham city council's IT initiative, aims to make 1,000 connections with business, libraries, students and other local authority sites by the end of 1998. Following these trials, the network may be extended to more than 165,000 cabled sites throughout the Midlands.

The Broadnet project is a partnership between Telewest Communications, ICL and IBM and includes more than £2.4m in funding from the European Regional Development Fund.

Professor Stephen Molyneux of Wolverhampton University, says the project reflects the government's commitment to provide a University for Industry.

"Distance learning is a key facility which we're providing, but it's by no means the only service," he says. "The trial video-on-demand server can deliver up to 2,000 simultaneous, full-speed, interactive programmes – and we'll be using this to offer learning, information, directories, plus access to the Internet."

The Broadnet project is delivering video and training materials on-demand across an ATM network to PCs at strategic points, as well as to small businesses.

Prof Molyneux says: "We can add new services and features for users from a central point. And because each user can have a smartcard, they can – in theory – use it at any DOT box to access their own personal services, at home, at the library or at work."

- *Prof. Stephen Molyneux is on e-mail: S.Molyneux@wlv.ac.uk*
- *DOT Matrix is a UK-based company, headed by Martyn Gilbert, formerly of Acorn Computers and project leader of the BBC Master microcomputer – still widely employed in primary schools.*
- *More details on the Cambridge and Midlands projects are available from Steve Livingstone on steveli@dot-matrix.co.uk*

Companies support Project Connect

Thirty companies from the information and communications industries in the UK are involved in the supply of cable and software to support a nationwide scheme to provide schools with the latest IT networks.

Princess Margaret Free School at Windsor recently hosted a reception attended by Princess Margaret to thank the supplier companies which include Anixter, Netscape, Oracle and Lucent Technologies. The Systimax cabling infrastructure that forms the backbone for the network is provided through the Lucent Foundation which supports various philanthropic projects. The Lucent web site can be found at *http://www.lucent.com*

Royal link-up: Princess Margaret goes online with pupils at Princess Margaret Free School in Windsor

INTERNET IN SCHOOLS • By Stephen McGookin

Web address could be: *www.lookmumwe're ontheinternet.org*

Parents are wondering how far their children will use the Web merely for play

The fanfare surrounding the forthcoming launch of NetYear in the UK – a programme that would link every school in the country to the Internet within five years – may be somewhat muted by the findings of a report on The British and Technologies.

The third annual study by chip maker Motorola showed that about two-thirds of parents felt computers were preventing children from developing social skills. Four out of five parents were concerned that the equipment was being used primarily for playing games.

While this might well represent a generation gap – with parents' fears arising from their own unfamiliarity with the technology – the rapid growth of the Net in British homes (about 960,000 are now online, according to research by NOP) should help smooth the way for anyone interested in making the most of the technological opportunities.

With the growth of online resources, there is caution that a consequence could be a drop-off in demand for conventional educational products. James Arnold-Baker, chief executive of Oxford University Press, says that the UK is not providing its children with adequate books.

"I often go out with OUP sales reps," he says. "Secondary schools used to buy a class-set of textbooks. Then they began to buy half a class-set. Often nowadays it's a quarter class-set."

But in terms of computer penetration into the classroom, he observes that "the UK is not disadvantaged".

In the US, the educational community at all levels has long taken advantage of the net for adding functionality to activities such as distance-learning and library reservations.

The US National Education Association (*www.nea.org*) believes that technology in the educational process "improves the learning opportunities for students, improves the quality of instruction and improves the effectiveness of educational employees".

The association argues that education employees "must have access to necessary technology for managing and advancing instruction".

"Such technology must be compatible with and on at least the same level as technology in general use outside education."

For individual users, a number of newsgroups such as *misc.education* host lively general debates around a specific subject. You can usually zero in and find ones that concentrate on your geographical area or subject specialisation.

> 'Teachers need to have the tools and resources to use technology effectively.'

The magazine Education Week on the web (*www.edweek.org*) is an example of an information source that is genuinely useful to the practitioner. It prompts submission from readers in its online forum.

Any of the World Wide Web's general search engines will have an education section or will point you in the general direction of collated lists of specific links. Like most other general topics, they will be heavily weighted towards US users.

In both Britain and the US, telecommunication companies, Internet service providers and software companies have been quick to see the advantages of catering to a growing educational market online.

BT's Home Campus (*www.campus.bt.com*), in addition to providing online resources to support the national curriculum, demonstrates, the company says, a commitment to "lifelong learning". The service is targeted at families with children between 6 and 16 and costs about £5 a month.

Subscribers to Virgin Net (*www.virgin.net*) can access its Education Zone, which offers a wide range of national curriculum resources as well as revision guides and career advice.

In the US, AT&T's Learning Network (*www.att.com/learningnetwork*) was launched in 1995 and is a "$150m commitment to support teacher training and learning through innovative uses of technology".

Last month, the service won a national award from the Educational Technology and Telecommunications Markets Conference (EdNET).

Joan Fenwick, director of the Learning Network, said: "A core belief of the AT&T Learning Network is that teachers need to have the tools and support resources to use technology effectively."

Amid the scramble for educational screentime, traditional providers of learning resources have not been slow to adapt to the new environment. Encyclopedia Britannica (*www.eb.com*), the 229-year-old publisher, is seeking to compete against CD-Rom encyclopedias by augmenting its traditional product with a search engine which ranks 65,000 educationally valuable web sites chosen by a team of 25 editors.

For US high school students choosing a degree course, there are a number of lists of educational establishments, most of which will detail courses on offer and names of instructors on the faculty.

On the more unusual – but entertaining – side, there is a site called Campus Tours (*www.campustours.com*). It has, as its name suggests, a collection of virtual tours of US college campuses, enhanced by a number of 'Webcams' showing live pictures.

A case of 'all work and some play'

It's a war out there in the international games market. As with any battle, there are winners, losers and more than a few casualties for investors, reports Philip Manchester

FT IT

New directions

Investment in the electronic games industry

The world-wide games market has always been a war zone. Since the early 1980s when the first computer games systems came to market, games platform vendors and software developers have competed ruthlessly to dominate the market.

There have been many casualties – from early pioneers like Commodore and Atari – to more recent losers like Entertainment On-Line (E-on) which went out of business in October. At the end of the 1990s, advancing technology takes this continuing war into a new phase.

"The potential for high-end video game consoles has attracted some well-known consumer electronics manufacturers including Sony and Panasonic. However the fiercest competition may not come from within the video game hardware industry. The real threat to a long-standing game console industry is the growing computer market. As 3D graphics and audio hardware become commonplace on home computers, the machines are becoming more capable of running console-type game software," observes Price Waterhouse in its 1997 technology forecast for the electronic entertainment industry.

According to IDC, 1997 sees the first skirmish coming from the new wave of 64-bit chip based consoles from Nintendo and Panasonic. Sales of these advanced machines are expected to equal their smaller, 32-bit brothers over the next 18 months. But the growth of the personal computer in the home market – together with new potential competitors such as the network computer and TV set-top boxes – adds new dimensions to the games market.

A threat

The PC in particular poses the most significant immediate threat to the established games console market. The advances in technology that have equipped PCs with multimedia capabilities and the commitment by software developers to bring their games products to the platform, put it in a strong position as the dominant games platform in the short- to medium-term. Most significantly, Microsoft has provided a direct interface between Windows applications and new wave three-dimensional graphics technology with a variation on its Active X technology.

Called Direct X, it gives games developers a fast standard interface to the new generation of graphics accelerator chips. "Until recently there was no interface for 3D on the PC. But Direct X changes all this. Without it, the Windows was too slow for games. But when combined with fast Pentium chips and accelerator chips, Direct X makes life a lot easier for games developers," says Hermann Eiden of graphics card specialist Diamond Multimedia.

"Since the start of this year, most PCs have been sold with 3D graphics capability built in which creates a ready market for PC games developers. This is interesting because the market for PCs in the office is saturated – but not in the games business," he adds.

The rise of the PC as a platform for games is being pushed by other forces. The games console market has a radically different business model to the PC. While PC technology has evolved steadily over the last 10 years, the console industry is characterised by sudden spurts of development followed by long periods of relative stability.

"The console industry is based on a fixed architecture. Developers must wring every ounce of power out of a product before it moves on. We are reaching the ceiling on the current generation of PlayStation, for example. The console business moves in five-year cycles and then you get a great leap. You had 8-bit consoles, then 16-bit, 32-bit and now we are moving to 64-bit," explains Ian Hetherington, managing director of Psygnosis.

"By contrast the PC is characterised by free-format evolution. The entry costs for research and development are pretty low. It has developed exponentially – but steadily – for a number of years and now it has reached a critical point in its development."

Cost of entry

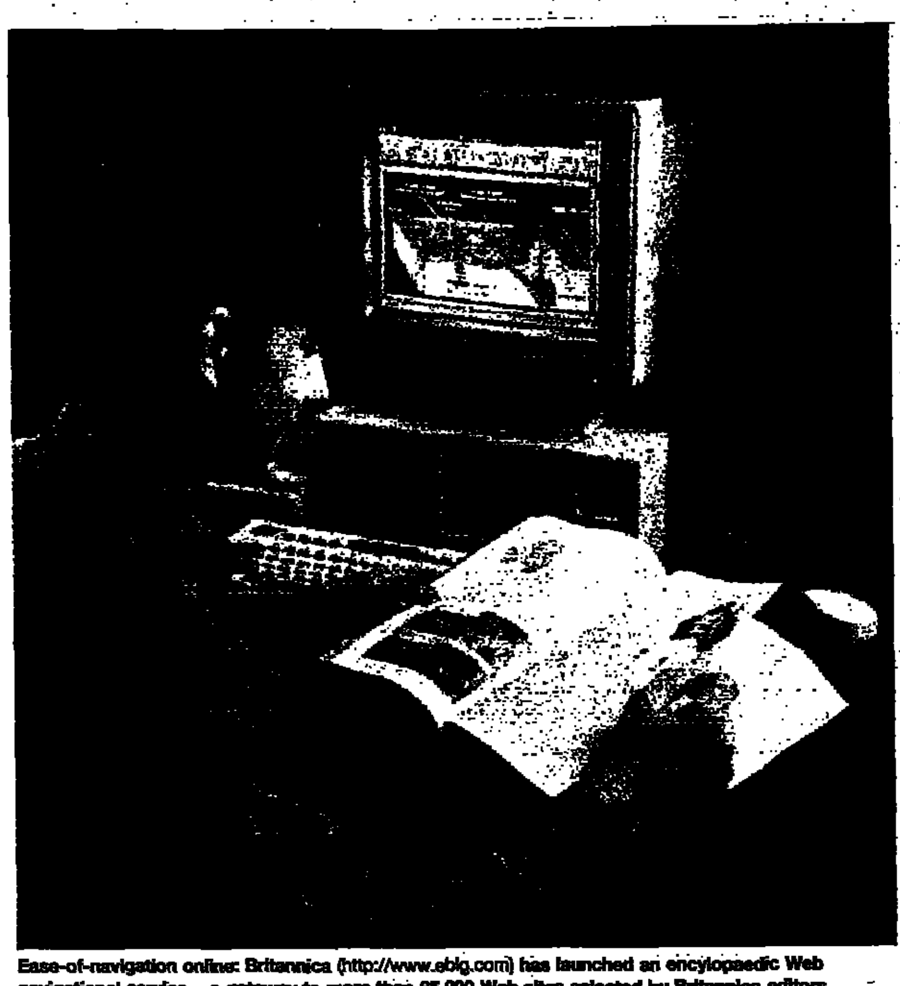
It is not only technology that is pushing the PC into a prominent position in the games industry. The low cost of entry and the absence of any royalty payments to manufacturers is encouraging developers to focus their efforts on PC versions of their products. Developers are obliged to pay between \$5 and \$22.50 per unit royalty to the platform vendor for the privilege of supplying their games on traditional cartridge-based consoles. Inevitably, this pushes up production costs and puts the console platform out of reach for many smaller developers. But the PC's rise to prominence in the games industry could be cut short by other medium-to-long term developments in technology.

The growth of the Internet and the possibilities offered by on-line games through network computers or low-cost TV-based systems are certain to create another battle ground within a few years. It is, however, likely to be a while before this will become a serious threat to the established industry – as Mark Bernstein, former head of Entertainment Online (E-on), found to his cost recently. E-on aimed to bring online distribution of games at low cost to the Internet community. Efforts stalled in October when the company failed to seal a deal with Sega to distribute its games software on the Net.

"We set out to bring a library of games and educational programs to consumers via the Internet for £5 a month – but we were too early," explains Mr Bernstein. "There is a tendency for the industry to get carried away with the possibilities of technology without seeing that consumers are not ready for it yet. The same thing has happened with video on demand – people are happy to try it out – but when it comes to parting with their money they are not so ready to do that yet," he adds.

Despite the demise of E-on, Mr Bernstein still sees a great opportunity for the concept in the longer term and is working with Herman Hauser of Acorn Computer fame to bring new products to market. "We have to accept that the development of the Internet will be littered with early casualties because the consumer is not willing to pay for services yet. Online gaming will happen, but it is still a few years away yet."

When it does, it seems very likely that it will be characterised by the same war-like tendencies that have coloured the games market for the last 10 years.



Ease-of-navigation online: Britannica (http://www.ebig.com) has launched an encyclopaedic Web navigational service – a gateway to more than 65,000 Web sites selected by Britannica editors

New service for Net users

Encyclopaedia Britannica has launched the Britannica Internet Guide, a free Web navigation service as a gateway to other information sources on the Net. Called 'BIG', it covers 65,000 Web sites: users search for information using 14 topic areas. These lead to Web sites related to the subject, as well as a list of sub-categories.

BIG is the next step in Encyclopaedia Britannica's quest to go electronic. Britannica already offers similar links within its online version, Britannica Online, which was set up in 1994, the first encyclopaedia to go on the Net.

In Britannica Online, users can click on to links within the encyclopaedia and connect to other relevant data.

The BIG service, however, takes this a step further. It is solely a free navigation service, helping users to find information on the content-packed Internet.

"Other services turn up hundreds of irrelevant hits, and there's no way to tell the good sources from the questionable ones.

"Our editors make it easy for users to quickly locate authoritative and useful information on thousands of topics," says Joan Julian, vice president of online services.

COMPUTER GAMES • By Michael Dempsey

Knowing the rules of the game

Home computer users are buying the software, beefing up the hardware, and settling down to the serious matter of playing games

When a personal computer for home use is marketed strongly on the back of powerful visual images, the prospect of playing computer games becomes an important factor for many potential buyers. Nevertheless, it is difficult for manufacturers to establish just how far hardware sales are driven by game-playing. As Gillian Simpson, consumer products marketing manager at Mitsubishi in the UK points out: "It makes no commercial sense to box customers in."

Japan's Mitsubishi has recently revamped and relaunched its personal computer product line in the UK and Ireland. The new machines, the MS500 and MS600 series, cost between £1,200 and £2,800.

This Mitsubishi range replaces previous equipment, including the MS660, a personal computer that was promoted on the basis of a very strong graphics capability. This attribute could mean the 660 was attractive to the design community.

Given the high price of many personal computers relative to other electronic goods sold into the home market, the PC will always be portrayed as much more than an entertainment device. "Consumers won't admit they bought a machine just to play games," says Ms Simpson.

The games fanatic is still supported by the revised Mitsubishi range, with sound quality a big selling point for the new PCs.

"High quality speakers are still an important issue for the customer," says Ms Simpson. The "gaming theme" – as she describes it – is alive and well in Mitsubishi's marketing plans: computer games boost PC sales. But the world of the teenager carrying a Sony Playstation games console compared to the home computer-user who opens up a games option after using his personal finance package, are very different scenarios. Is it therefore realistic to talk in terms of a war between the PC and the dedicated games platform?

Indicator

Diamond Multimedia, a \$600m US company, produces chip sets optimised for 3D graphics and used in PCs. So Diamond's fortunes might be an indicator of the weighting of games in PC sales. Hermann Ezdem, European marketing manager for Diamond, says it is impossible to break down PC sales on the basis of demand for his technology.

He thinks the arrival of the Pentium chip on PCs "evened-up the odds, giving users of traditional business applications the chance to break out into a whole new set of games". But that does not mean those customers would have turned to a games console as an alternative platform.

Price is a key factor in sales of games consoles. The best-selling Sony Playstation now retails for £130. This is 10 per cent of the cost of many personal computers. But the decline in PC-pricing over recent years has narrowed the gap. PCs and games consoles are not selling head-to-head, but technology has allowed the PC to confront the games console on its home turf, the look-and-feel aspect of computer entertainment.

Joysticks

Logitech was founded in Switzerland and has grown to become a \$450m business, managed from California. It sells sophisticated software used in computer-aided design projects for clients like Boeing.

The same technology goes into Logitech peripherals such as joysticks for the armchair fighter pilot playing out a dogfight on a PC. Sales of computer joysticks total \$120m worldwide with Logitech claiming 25 per cent of that market with products such as its £99 Cyberman.

"This sector is growing at 30 per cent a year," says Marc Chatel, a Logitech senior vice president. "People want to increase the realism of their games."

Logitech takes this demand very seriously. It is working on ways to deliver what the games industry terms "force feedback" – sensations such as driving a vehicle over a particular surface. The same technology that allows games players to move closer to their favourite fantasy through the Cyberman joystick contributes to an upmarket mouse device. The \$600 Magellan is used to input data at the other class of Logitech clients, the engineering design centres at locations such as Boeing.

Mr Chatel has an interesting view on the impact of games technology. "At Logitech we believe the PC will be the winning platform," he says. But the PC will only eclipse the games console by evolving into a consumer-friendly device, he believes. "People will not want to have a separate physical device in their living rooms."

The set-top box, converting the TV into a reception device for a variety of services, will carry the day for PC technology, even if the actual computer disappears into an Internet connection.

Nevertheless, if Mr Chatel is right in his opinion, the games console has a long way to go. Sony has sold 20m Playstations worldwide, with production running at 1.5m units a month. The Playstation is Sony's most successful product ever. But Tomb Raider, a games success story from Eidos Interactive, runs on both the PC and the Playstation. Tomb Raider has sold around 3m copies, and a recent research note from Dresdner Kleinwort Benson recommended Eidos shares. Growth in the PC games industry is estimated at 30 per cent with DKB citing the increasing penetration of multimedia PCs as a key factor. Eidos is coy about the sales of its PCs and consoles, but industry sources suggest half of its Tomb Raider games are destined for a Playstation.

The crossover between games technology and the orthodox world of computing is illustrated by Silicon Graphics, a \$4bn group that made its name in engineering workstations. SG has a subsidiary, the Mips Group, that designed the chip architecture for both the Nintendo 64 and Sony Playstation. Bert Zandhuis, Mips' manager in Europe, points out that the same technology that runs a \$150 games console today surfaced in an SG computer costing \$100,000 in 1992. "This technology is coming down really fast," he says.

The games industry has taken high technology and packaged in for a mass market. Despite the optimistic claims of IT companies, loading and manipulating software on a PC platform is still not as easy as plugging in a games console. The two markets are huge and strong. Companies like Mips and Logitech are probably in a very strong position, filtering developments down onto games machines. The phenomenal sales figures of Sony illustrate that the PC industry is not about to write the obituary of its gaming rivals.

PC AS A GAMES PLATFORM • By Philip Manchester

Many an adventure along the way

It appears that 1998 will be 'the year of the game' for the personal computer. Specifications are high enough now to make the PC a strong competitor for the games console

Microsoft would probably like to forget about Adventure. In August 1981, Microsoft Adventure, "a role-playing fantasy game" based on Dungeons and Dragons, was included in the launch of the first IBM Personal Computer. Also introduced with the launch was Visicalc and many other long-forgotten software packages. The operating system was known only as DOS.

Adventure was notable because it was, at the time, the only package for the PC purporting to be a game. "The program allows players to store the status of two game on a diskette," said the blurb. Few rushed out to buy it, and the PC was written off early as a serious platform for games. The Apple II and machines from companies like Commodore and Atari were a far better bet.

But this is set to change in 1998. Despite the simple fact that the PC was never designed as a games machine, the specification has reached a point where it challenges the established console market for games. More importantly, the specification for the PC is becoming much narrower – giving games developers a smaller target to aim for.

"It has been virtually impossible to write a game for the whole PC market because the range of the specification runs from very slow, low memory systems up to the state of the art Pentium II. But next year about 100m PCs will be sold world-wide – all of them with a high enough specification to run the most advanced games. Even if you discount half of those as business computers, another quarter or so for consumers who don't play games, that still leaves a market of 15m to 20m. That is as big as the consoles market," says Ian Hetherington, managing director of Psygnosis.

Founded in 1984, Psygnosis claims to be the number one entertainment software developer in Europe and has produced a long string of hits, such as Lemmings, Formula 1 and Discworld. In 1993 the company was taken over by Sony to develop the software for the PlayStation console – but it still sees the PC as an important platform.

The company is investing $50m (£29.50m) in PC games this year. "We are strong advocates of the PC as a gaming platform – but not as we have known it in the past. It has traditionally been for niche market, low-technology games. But the PC has evolved. Windows 95, higher speed processors, faster CD-ROM drives and 3D accelerator chips have turned the PC into a wonderful platform for gaming," says Mr Hetherington.

He goes on to say that games software is the only application that really stretches the modern PC. "We have increased our investment in PC games software eightfold this year. Rather than being a fraction of our investment in consoles – it is now equal." Despite this level of commitment, Mr Hetherington acknowledges that there is still some way to go before the PC is easy enough to use for it to take over from the Segas and Nintendos.

"The technology is up to it. So the only barrier is ease of use. The PC market needs plug and play. There is a perception that it is a difficult machine to use and we need to simplify it so purchasers can be sure they won't run into problems."

The general-purpose nature of the PC – together with the wide range of add-on options – makes it prone to problems when installing software. "It is still too difficult for non-techy people. Until your granny can just plug it in and use it, there will be resistance to it as a games machine," echoes Peter Bilotta, European president of US-owned games company Interplay.

"The problem is that, the better the PC gets as platform, the more complicated it becomes – especially when its comes to graphics. Nevertheless, I see the PC's future in entertainment – it is taking from business as the main application area," Mr Bilotta adds. Graphics has always been a limiting factor on the PC – but no longer. The new generation of three dimensional (3D) accelerator chips – which give the PC equal, if not greater, graphics processing power than most consoles – put the PC squarely in the frame for games developers.

"There is no doubt that the impact of 3D graphics chips is making the difference. With real 3D you have to build a mathematical model and the minute you start to do it, it is compute intensive," explains Tony McClaren, chief executive of graphics hardware specialist Videologic.

"It's about polygons, polygons and more polygons. To get the graphics quality you need to generate as many as 600,000 polygons a second – and then you have light them, render them and introduce texture to get the realism," he says.

"All this stuff is eating computer power like crazy. But with accelerator chips you can leave the PC's processor to get on with the game play. You can do seriously good graphics on the PC now."

G-Police, a new game from Psygnosis, a Sony group company, can be played on a PC or a PlayStation. Founded in 1984, Psygnosis claims to be 'number one entertainment software developer in Europe' and strongly advocates the PC as a games platform

The PC's ability to display graphics has caught up with the console systems, he adds. "The frame-rate is catching up and the resolution is well ahead of the current consoles." With PC technology now comparable to console technology, it seems likely that it will come to dominate the games market – until, that is, the next generation of console systems comes along. The PC could also be overtaken by a device that combines many of the functions of the PC with a console.

"The new consoles will be both PCs and consoles. You will be able to surf the Internet, play CDs and digital video disks with stunning 3D graphics. And the price could be as low as $300," says Mr McClaren.

He adds that, with the new Microsoft CE operation system, such a device could also compete with the so-called network computer. But it won't have Adventure on it.

ONLINE GAMING • By Michael Dempsey

Players pit wits across the globe

Online games provide intrigue and fun for more than just the players. Software developers, advertisers, and others are also learning the rules

The MBA Enterprise Corps is a programme sponsored by 20 business schools in the US. It sends MBA graduates out to work alongside staff in changing and emerging economies.

Michael Simon's MBA from Washington University, St Louis, took him to Budapest and an encounter with the computer programming community of Hungary. Today, he is managing director of E-Pub, a company with offices in London, New York and Budapest and an agenda to sell advertising on the back of interactive gaming played through the Internet.

Interactive gaming means allowing members of the public to pit their wits against each other via the medium of large computer programs running over easily accessible networks. Budapest is home to the development effort that keeps E-Pub in business. Mr Simon claims to have spotted the commercial potential of interactive games back in 1995. "I saw entertainment and games as the new areas we could compete in."

Visitors to E-Pub sites such as Trivia Blitz do not pay for the pleasure of joining in a quiz and competing against other players for cash prizes.

E-Pub uses the presence of Trivia Blitz on 900 web sites to attract advertisers such as Sony and British Airways. E-Pub claims 40,000 registered visitors worldwide and says the average player stays on the line for 72 minutes.

Does using a more complicated medium than the roadside billboard have an impact on costs for E-Pubs customers? Mr Simon insists that this is not an expensive delivery mechanism. "In terms of price it's very much in line with the other alternatives. It costs around £20 pounds per 1,000 audience members." He says E-Pub can often assess its impact through a bounty system. "We get a direct bounty from the advertiser. Say a player sees an advert, clicks on and signs up for a magazine subscription. We get $5 per head."

The demographics of E-Pub's audience are established via a registration database. Cash prizes provide an added incentive for players to register details on their educational background and age. "We only show adverts to people who want to see them. They have to click on to get the ad." Males over the age of 25 are E-Pub's prime base, and the decision to open up an advertising page means they go for different combinations of advert. Mr Simon believes this offers a real consolation to prospective advertisers concerned about investing their image in a new delivery mechanism. "You don't just buy a general audience and hope you get a decent percentage of hits."

Online advertising is not a pot of gold, yet. E-Pub's revenue stands at £500,000 and it will make a loss this year. Mr Simon thinks a profit will appear by the fourth quarter of 1997. Software has been the prime investment. "You are faced with a full year of development before the product appears." He is convinced that online advertising has a long-term future. "More GDP is creeping into the online world."

> Online games emerged from university computer departments

Bill Goodland, UK manager of the business contact group at Compuserve, the world's largest online services company with 5.2m members, confirms that customer profile is what characterises advertising in this sector. "We have 400,000 UK subscribers and 20 per cent are in the 25-35 age group. That's the magic age group for the games industry." Richard Branson's Virgin group of companies has expanded out of record shops into the airline business and recently took over a privatised UK rail franchise. Virgin Games advertises on Compuserve, recognising that its own interactive games have to hit Compuserve's subscribers.

Hyperion Systems is UK consultancy specialising in telecoms and electronic cash. Hyperion uses the interactive gaming sector as a model for other business areas that are traditionally seen as deserving serious attention.

"Games are a laboratory for business technologies," says Dave Birch, Hyperion director. "Gaming addresses business problems such as how to collect money from people who don't have credit cards. Most of our clients are either banks or telecoms companies so this has a direct relevance."

Unisource, a consortium comprising AT&T and its European partners, is using games to test the practicality of creating an online infrastructure that does not require personal computers. With the growing recognition that set-top boxes will draw the Internet down into the consumer electronics arena, this experiment is significant. Customers with a Nokia 9000 personal digital assistant and phone combination pay just 40p to download a computer game. This tiny sum is subtracted from an electronic cash card which is connected to the Nokia device. Taking the PC out of the equation lowers the entry level to new services.

Online games emerged from university computer departments where students engaged in joint role-playing exercises long before today's popular technology was available. Mark Bernstein founded Entertainment Online in 1995. He is pushing online gaming into the living room for a subscription of £5 a month. With $35m invested to date, Entertainment Online has 150,000 users. It is in the process of acquiring the Seaga Channel, which uses cable to deliver online facilities. "It's not big business today, but it will be in five years time" is Bernstein's verdict.

Online and interactive games are popular. Advertisers are exploiting this vehicle today. Research firm Jupiter Communications has investigated this market and predicts gaming will account for 11 per cent of all online revenues, amounting to $1.6bn by 2000.

But Hyperion Systems notes that the simple model of games sales plus advertising equals revenue might not work out. The number of operations offering online gaming could explode, undermining the value of the existing advertising structure. Online gaming holds out the promise of a huge youth audience, but in this age group payment schemes cannot rely on credit cards. Many potential customers don't hold one. Deciding how to charge a growing online gaming community is the real challenge. The answer will shape how interactive games develop in the next century.

DIGITAL VERSATILE DISKS • By Geoffrey Nairn

Boundaries blur between various digital media

The market for CD-Rom titles appears to be shrinking as the digital versatile disk (DVD) begins its ascent. But DVD still faces challenges

The world is going digital and with it large chunks of the traditional media and entertainment industries. But as the boundaries between music, film and publishing blur and new formats emerge, the task of creating innovative content to feed these digital media becomes more challenging.

Each autumn, Frankfurt hosts the world's largest publishing fair. Much of the buzz in recent years has come not from books but from digital products. The mood this year in the Electronic Media hall was more subdued with 80 fewer exhibitors than in 1996. "We are seeing a weakening in the boom of recent years," says Peter Weidhaas, director of the Frankfurt Book Fair. The optimism that originally greeted the arrival of digital media has faded and CD-Rom publishers have suffered from a glut of lacklustre titles.

"The consumer CD-Rom industry has had a rough two years," says Julie Schwerin, chairman and chief executive of US research company Infotech. "A massive amount of titles came into the market and could not be absorbed."

Mr Weidhaas says the digital downturn is not as bad as it might appear and claims many publishers at the Frankfurt Book Fair have stopped promoting their digital products on a dedicated stand and instead show them alongside their traditional offerings.

Digital media are indeed entering the mainstream and the launch of a new film or music group is today incomplete without an accompanying web site, CD-Rom or video game. The range of media is likely to expand in the near future with the arrival of Digital Versatile Disk technology. Hollywood is promoting the technology as the modern alternative to video cassettes, and the computer industry sees it as replacing CD-Roms.

As its name suggests, DVD can be formatted in different ways to handle a variety of content. The most important of these for the content industry are DVD-video, the replacement for prerecorded video cassettes, and DVD-Rom, a higher-capacity replacement for the CD-Rom in storing commercially produced games and software.

In the US and Japan, the first DVD-video titles and players are already available. The film studios plan to launch around 500 titles in the US for Christmas. For consumers, DVD-video offers much better picture and sound quality than tape. Research conducted for the DVD Forum, a consortium of hardware manufacturers, claims 12m US households and 9.8m western European households are prepared to buy a DVD-video player. However, DVD-video will not arrive in Europe until next spring because of delays in delivering encoding technology to add multilingual soundtracks.

A bigger problem is a competing pay-per-view standard for video disks, called DIVX, announced in September by a rival group that includes some DVD Forum members.

The DVD Forum worries that customers will buy DIVX disks unaware that they cannot be played on a DVD player – though DVD disks will play on a DIVX player.

The controversy comes at a critical time for the new media industry. DVD is already two years late, CD-Rom sales will soon peak and pre-recorded video rentals are declining. DVD promises to inject new life into these markets and end the "format wars" that confuse consumers, fragment the market and distract content developers.

DVD is compatible with existing audio CDs and CD-Roms. DVD-video disks can be played on consumer players or DVD drives built into future PCs. "This ability to be interchangeable across platforms is exceptionally important for the success of DVD," says Infotech's Ms Schwerin, who went to the Frankfurt Book Fair to convince content providers to forget the CD-Rom and embrace the greater potential of DVD-Rom – the software version of DVD.

"The money being made in the CD-Rom industry is being made by the hardware manufacturers and the content providers are not making nearly as much," she says. It does not have to be so with DVD-Rom, she believes, although publishers must accept the risk inherent in the new format.

"Until DVD-Rom achieves 2m to 3m installed drives, it's risky to put out titles," she says.

Infotech predicts 8.5m drives will be installed by the end of 1998. Some media companies have already adopted the new format. For example, Abbey Road Interactive, the new media arm of London's famous Abbey Road Studios, recently installed a DVD-Rom authoring and mastering facility.

The studios, once used by the Beetles, have moved into the multimedia age and as well as DVD-Roms can also produce DVD-Video. Its first title is a Queen pop video – and a format called Enhanced DVD.

The latter allows Internet links and PC or Macintosh files to be included in DVD-Video titles. This gives an enhanced experience for those who play the video disk on their computer.

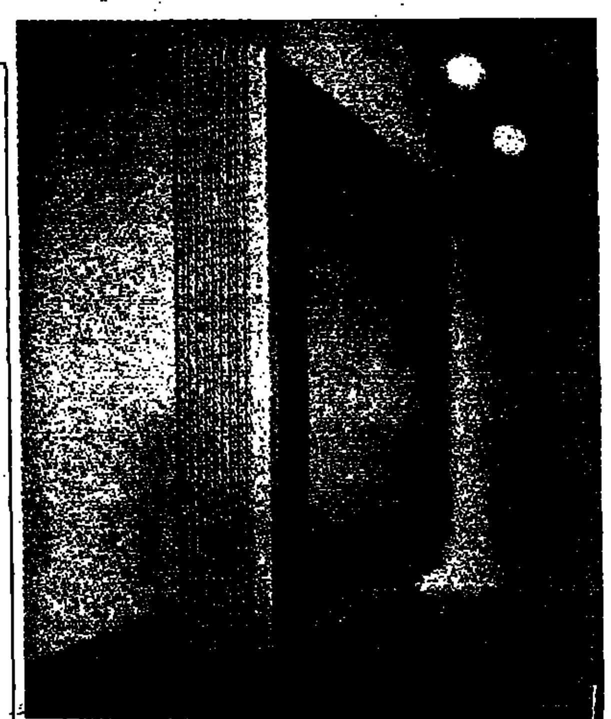
Content for DVD can be created using various multimedia authoring tools, such as Macromedia Director, which costs about $1,000 and is today widely used for producing CD-Roms and web pages.

Sonic, a specialist software house, has developed an all-in-one package specifically for DVD, called DVD Creator Workstation. This software, which costs under $100,000, covers a much broader range of tasks, such as video and audio encoding and proofing. Abbey Road Interactive claims such tools combined with the full-screen, full-motion video capabilities of DVD and its superior sound quality open up a wealth of creative possibilities for content providers.

"With DVD-Rom, multimedia has finally grown up," says Fionnuala Duggan, director of multimedia services for EMI, Abbey Road's parent. However, others are still waiting for publishers to fully exploit the creative potential of DVD.

"So far, the most creative part of DVD has been the packaging," - says Ms. Schwerin of Infotech.

The 'father' of television: the Scots inventor created the world's first TV pictures in the early 1920s using a camera built out of £2 worth of junk. Today, television services blanket the globe



Sony's prototype 'Plasmatron' flat colour television for home use

هكذا من الأصل

New hybrid role for the IT director

Nuala Moran looks at the way the IT director of a large retail chain combines technical knowledge with broad business objectives

The realisation is dawning in the boardroom that information technology is no longer just an operational tool, but is central to business strategy.

Consequently, the boardroom door is opening to a new breed – the IT director, sometimes called the chief information officer.

The IT director has a hybrid role – to match an understanding of the nuts and bolts with the commercial acumen to apply IT to drive the business forward. In IT recruitment terms an IT director must be T-shaped – combining an in-depth technical knowledge with a broad business experience. While such animals are rare, someone who exemplifies the breed is Chris Montagnon, director of Information Systems at Sainsbury's, the UK food and household goods chain. Before joining in 1991 he held a string of financial director posts at companies including the electrical retailer Rumbelows, the retail operations of the brewer Courage, and the computer services division of Granada. "My background is broader than if I had spent all my life as a pure IT person," he says.

"The company expects that contribution from its IT director. I am seen by colleagues on the one hand as the person who makes all the mechanics tick, but on the other as the person who can contribute in a business sense to how we're going to move forwards using technology."

In 1997/98 Sainsbury's will spend £165m ($278.85m) on IT, with £55m ($92.95m) going on capital projects. This is among the top 10 IT budgets in the UK according to the market analysts Spikes Cavell.

Retailers in general, and supermarkets in particular, were among the first to make an explicit connection between information technology and business strategy. A list of the latest developments in the sector – loyalty cards, home shopping, in-store banking, self scanning – underlines the extent to which the fight for market share is underpinned by IT and not by groceries.

"The IT spend is becoming more and more important, because more and more of what we do is IT related. Previously I hardly met the people from the marketing department, now they are my main customers," observes Mr Montagnon.

So how does the IT director bring about the marriage of IT strategy and business strategy? "What we have is an organisation with a senior manager reporting to me from each section of the business. He is there to deliver on a day-to-day basis the systems to run the business, and also to provoke and stimulate debate on how IT can be used. Together with him I will meet with the relevant board director to look at the business plan for that area."

Mr Montagnon's office in Sainsbury's headquarters in Blackfriars, London is not deep in the heart of the 750-strong IT department but on the same floor as his fellow departmental directors in marketing, customer services, logistics and so on. "I know them all and work with them. It's my job to understand what their business issues are."

For example, Sainsbury's marketing department is now focusing on promotions to individuals. "My role is to say, if that is what we are going to do, these are the systems we need to have in place."

But setting business aims and then suggesting ways that systems can support them is reactive. With technology moving so quickly, can mean lost opportunity.

Mr Montagnon agrees. "There are of course situations where the technology leads the business strategy, for example in home shopping. Then you have to be more aggressive in saying, Look, the technology is now available, it has got these opportunities, and I think you should be making some investment."

Sainsbury's approach to new technology is to run small trials. For example, self scanning started as an R&D project to get experience of the technology. But in marketing terms the company soon realised it could be a channel to get messages to customers while they are shopping. This led to the development of scanners with radio frequency links to customer files held on the back office computer. "We know about you at the moment you buy the product. The display on the scanning device can say for example, You have recorded an allergy to nuts; we should advise you that this products has nuts in it."

"My job as IT director was to anticipate the business desire to market to individuals and to begin to put in place – ahead of time – the infrastructure which will enable us to do that. That's my contribution to strategy."

But Mr Montagnon stresses that technology cannot go out on a limb. "Obviously I need support from my business colleagues to even do a trial."

One of the frustrating aspects about applying IT to get an edge on the competition is that if it works everyone will follow suit. "Part of my job is to identify opportunities were we can be first, and also when we aren't first to make sure we implement things so that it is better. Sainsbury's was not the first in the market with self scanning, but it was the first with scanners with radio frequency links."

The prime example of IT winning market share is in loyalty cards. Tesco, the food retailer chain, was first to adopt them and in so doing overtook Sainsbury's as the UK's leading food supermarket chain. On the face of it, this looks like a failure of Sainsbury's IT strategy, but Mr Montagnon says although the technology was in place the board chose not to use it. "There was a general concern that all loyalty cards do is act like a discount on products. It wasn't until we saw the impact they had on the total volume of our competitors that we realised we had to join in."

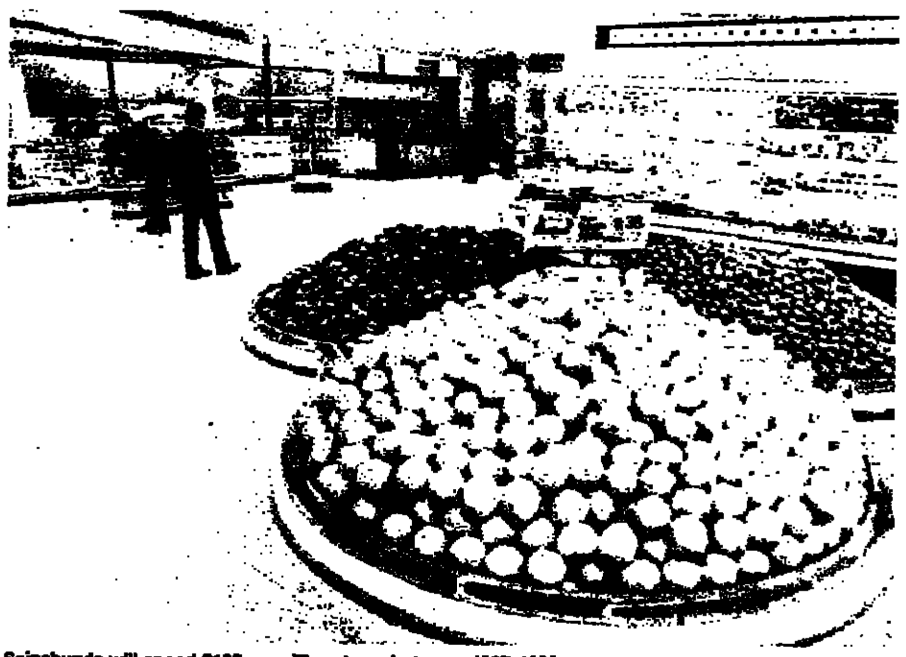
"My task then was to help the business catch up by being the best at exploiting the data which loyalty cards give us." This involved investing in a data warehouse to analyse the data generated by the cards.

Sainsbury's has reclaimed the initiative with its in-store banking service, launched earlier this year, which already has more that half a million customers. However, Mr Montagnon says this is not a IT-driven initiative.

"You don't have to be an IT person to recognise that if all customers ever do is go to a hole in the wall to get money, use a credit or debit card, and occasionally instruct their bank to move money from one place to another you don't need bricks and mortar to do it."

This illustrates that advances in strategy do not necessarily rely on advances in technology. "That's why from a strategy point of view, it is important to keep looking at what you've got already. I don't personally come at products such as home banking from a technology point of view. I come at them from a systems opportunity point of view." For example, self-scanning linked to a data warehouse can reveal the order in which customers shop, and the information is then used by store designers.

"My responsibility is to recognise these opportunities for using different sets of data."


Sainsbury's will spend £165m on IT systems between 1997-1998


Chris Montagnon, director of information systems at Sainsbury's: one of a new breed of IT directors

Business processes: changing role for the IT department: Page 17

FT IT

Managing information

Here and on the following three pages, FT writers look at the management of IT systems – and, in particular, the changing role of the IT director

IT PROCUREMENT IN THE PUBLIC SECTOR • By Nuala Moran

Moves to untangle red tape

European governments are supporting private sector IT solutions for public sector projects

The public sector across Europe is seeking to emulate the corporate sector's use of information technology to become customer focused and efficient. Most national governments have programmes to support this.

Finland has a National Strategy for the Development of an Information Society. The Netherlands has the Working Plan for the Information Superhighway and the UK supports the Information Society Initiative. Each of these countries aim to apply IT to improve access, cut bureaucracy and foster economic development.

Local government and services such as health and transport, are similarly seeking to use IT to streamline administration and enhance responsiveness.

But many IT vendors feel there is a barrier to supplying the public sector with modern systems that reflect the best practice of the private sector. That barrier is the IT procurement process.

"Information strategies drawn up at national and European levels cannot be implemented until the procurement process is substantially modified," says Martin White, principal consultant with TFPL Ltd, an information management consultancy, based in London.

His view is based on a survey of IT companies – Cap Gemini, EDS, Hewlett Packard, ICL, Digital, Unisys, Oracle and Compaq – carried out by TFPL earlier this year. The survey suggested that changes are needed to the process by which 100,000 public sector purchasing authorities in the European Union acquire hardware, software and services with a value of more than £15bn a year. The public sector accounts for 48 per cent of the gross domestic product of the European Union.

Suggested changes to the procurement process include: reducing the time between publishing the tender and initiating the project; ending the principle that the lowest tender wins to make it possible to select IT solutions which may not be the cheapest, but which offer long term value for money; and allowing suppliers to offer solutions that meet or even exceed the objectives of the project even if they do not use the technical solution envisaged by the administration.

The suppliers complained that tender documents specify hardware and software components to a detailed level, rather than outlining the project objectives and asking for appropriate solutions. This rigidity is compounded because development in IT is so rapid that the specification is not up-to-date by the time the contract is awarded. One example is the rate of change in personal computers.

"The shelf life of a PC is

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BUSINESS PROCESSES • By George Black

Globalisation heralds radical changes for IT departments

As more IT services are outsourced, IT directors are turning into information management directors, more involved in business strategies

The role of the information technology director and that of his department are changing rapidly.

This evolution has occurred for a number of reasons, not least because guardians of the mainframe are much less in demand since downsizing swept through the user community.

In the new world of client/server systems, users help themselves to information through their personal computers.

They do not have to ask the IT department for it.

Since information has become democratized, it is increasingly the users who tell the corporate IT department what is needed.

The IT department's role in systems procurement is diminished too.

User representatives, finance directors and other senior managers now regard themselves as IT-literate and want to be involved in the evaluation and choice of new systems.

Finance directors, who used to be concerned mainly with corporate accounting systems, now take an interest in all the systems which affect the direction of the business.

The director who heads the principal user department may have as much influence on the purchasing decision as the IT director.

Besides, although the IT director may recommend what the company should buy, he often does not sit on the main board of directors which is responsible for taking the decision for large investments affecting the enterprise.

The adoption of corporate standards for hardware and software means that large new systems are being chosen less frequently by large companies, which have already established their preferred supplier lists.

The IT department may have restored some of its authority by recentralisation of purchasing, but its autonomy is gone forever.

However, events such as the year 2000 date change and the advent of European Economic and Monetary Union (Emu) can present IT departments with a new challenge and a new opportunity.

The challenge is to satisfy business partners that the company is tackling the problems adequately and is safe to do business with.

Even credit at the bank will soon be dependent on being able to prove year 2000-compliance.

The opportunity is to replace old systems with new ones that position the company better for change and expansion. Plenty of IT directors' reputations will be made or lost on these issues.

Another change that undermines the traditional role of the IT director is that those who are only competent at managing IT are no longer so highly valued by most organisations.

Now they typically want a hybrid manager who, as well as ensuring that systems keep running, can contribute to forming a long-term business strategy, of which IT is an increasingly important part.(See report, page 15, on the role of the IT director in the retail industry).

Systems have such a direct impact on the core of businesses now that IT has become too important to be left to the IT department.

At Oxford University Press an Internet committee was set up by Graham Lynch, the IT director, comprising managers from across the business, because online trading was beginning to affect the future of the company.

"It would have made no sense to hold the discussion within the IT department as it was an issue for the entire publishing business," says Mr Lynch.

"Other managers have to understand the systems questions as much as I do."

Mike Shinya, UK sales director for Oracle, which supplies software to many large companies, notes that IT buyers no longer concentrate on finding systems to support today's businesses but have to focus on which systems can enable them to move into new markets.

Globalisation is also radically changing the function of the IT department.

"To enable orders to be taken in one country and delivered from another requires cutting across local companies and their systems," says Roy Jakes, regional IT manager for Guinness Brewing.

"The IT director therefore has to concentrate more on how the business processes are evolving and less on the systems which will support them," he says.

This is particularly true in the growing number of companies that have outsourced the delivery of their systems.

In these the outsourcing service provider takes over running the systems, leaving the IT director free to get more involved with business managers in planning the changes in processes.

There could be bigger and better things ahead for the more versatile IT director who is willing and able to become more involved in business strategy.

Organisations are realising that information is intellectual capital and as a critical company asset needs the attention of a senior executive just as much as money or staff.

If a finance director and a personnel director, why not an information director?

In the US, job titles such as chief information officer or chief knowledge officer are increasingly becoming used to reflect this change of emphasis in the IT role.

Last year, the UK IT Directors' Forum concluded that the title of information technology director was outdated and that "information management director" would be more appropriate.

This might seem a small change, but it would be a significant acknowledgement of the fact that information is no longer kept in the computer room under lock and key, but now flows freely around the organisation and between its suppliers, customers and business partners.

As business moves from a world of information shortage to one of information glut, the main task of the information director, whatever his title, is not to ration access but to ensure the traffic keeps flowing.

IT directors who can demonstrate skills other than just keeping control of systems have enormous potential to develop their careers.

The world is now a place where information is central to business success, but few chief executives fully understand the systems that carry it.

According to Charles Miller Smith, chief executive of the chemicals multinational ICI, many of his peers in the corporate boardrooms are getting left behind by advances in IT they do not comprehend.

He told the European Business School earlier this year that the IT skills needed for managing businesses in the future were not possessed by many of today's executives.

In a few years, the chief executive will have to be able to take responsibility for managing the company's information just as he at present manages its money.

Information is now central to the business process: keeping the 'traffic' moving is the crucial task of the IT director, but he also needs to be able to contribute to the development of business strategy

IT AND CRIME RESOLUTION • By Geoffrey Nairn

It's elementary, Holmes helps UK police solve crimes

The vast amount of data collected in serious crimes is being tackled by Holmes, a Unisys computer system that helps sort the evidence and corner the suspect

It takes two things to solve a crime: one is a police force, the second is information. But the huge quantity of data collected in an extensive murder investigation or fraud case can rapidly overwhelm police forces – and the chance of finding a vital link between scraps of information can be like searching for a needle in a haystack.

In the early 1980s, the failure of British police to quickly identify the murderer who became known as the Yorkshire Ripper caused a public outcry. It was revealed that he had been interviewed by officers on seven separate occasions.

The police had to sift through 40 tonnes of paper collected during the drawn-out investigation.

In the wake of the Yorkshire Ripper incident, police authorities decided to invest in a new computer system – called Holmes – to automate manual procedures for handling high-profile incidents, and so avoid similar fiascoes.

Four versions of the Holmes system were developed using proprietary hardware from Unisys, Bull, Cap Gemini and McDonnell Douglas Information Systems. Holmes uses dumb terminals with a rudimentary character-based user interface that police officers have to be specially trained to operate.

Holmes has had some notable successes. Don Dovaston, deputy chief constable of Derbyshire, recently told a gathering of European senior police officers how Holmes helped his force solve a particularly brutal murder in 1995.

Crime scene

The victim had been found in the Derbyshire countryside with multiple stab wounds. No weapon was found near the scene, and there was no apparent motive. After 10 days of searching, officers found one blade from a pair of gardening shears and a bricklayer's hammer in locations not close to the scene of the crime.

The true significance of these finds was only apparent weeks later. Thanks to the Holmes system, the Derbyshire police arrested a suspect who had worked as a bricklayer and had an interest in gardening.

"Without technology, we will always fail abysmally," says Mr Dovaston, who believes house-to-house enquiries is one area where IT could help speed up crime solving considerably. The painstaking work of ensuring that each lead is fully investigated and each suspect eliminated could be left to automation.

Holmes was designed primarily to computerise manual procedures and improve the administrative efficiency of an incident room. The system was later enhanced with specialist software tools, such as the Analysts Notebook package, to help with the investigation.

Police officers test the Holmes system, which sorts and cross references information on criminal investigations

Holmes is, however, more than a decade old. UK police forces see it as increasingly ill-suited to policing in the 1990s.

Challenges today include improving cost-effectiveness and detection rates, while responding to ever more complex legislation – such as the new rules for disclosure of criminal evidence that came into effect this year.

"We have to get the best possible results at the lowest cost," says Mr Dovaston. "We can no longer afford to have 120 detectives on a case."

Another problem with Holmes is the incompatibilities between the four vendors' implementations. This has made it difficult to link different systems together in order to compare incident databases in cross-border crimes.

In 1996, the UK police decided to modernise Holmes. A contract was awarded to Unisys to design Holmes 2.

Mr Dovaston headed the group that drew up the specifications for Holmes 2. Unlike its predecessor, the new system uses standard technologies, such as PC hardware, Unix servers and the Windows NT operating system.

To avoid the incompatibilities that plagued the first Holmes, the new project was awarded only to Unisys; no other contractors were involved. Each system costs from £100,000 to £430,000, depending on the size.

According to Mr Dovaston, one of the biggest benefits of Holmes 2 is its Windows graphical interface. This provides a better way of displaying data and allows more modern graphics-based tools to be used.

One such addition to the system is a document retrieval engine from Cambridge Neurodynamics, the specialist UK software house. This software can automatically "mark up" a written statement taken by an officer. It does this using a technique called dynamic reasoning, which finds and highlights in the statement key words, such as the names and addresses.

These key words are then used to generate a graphical image that links all the important data about that person – home address, phone numbers, business associations.

Thanks to the Windows interface, images, footage from video surveillance or recorded conversations can be "embedded" into each element on the screen. This allows investigators to bring together a variety of different information on a single screen.

Network planned

The Holmes 2 can also search through multiple databases – it supports Oracle, Ingres and Informix. The goal is to link the databases of all UK police forces.

Mr Dovaston believes this ability will prove particularly useful in dealing with unsolved crimes. It will allow detectives to link information from different sources on similar crimes. The system allows officers to match suspects by name, age, blood group, height, facial hair, as well as other parameters.

When drawing up the specifications for Holmes 2, the police were keen to reduce the amount of time needed to train operators to use the system. This was a weak point with the original Holmes –officers were required to learn cryptic key combinations to perform operations.

The police forces hope Holmes 2 will reduce their training needs by 50 per cent and allow them to halve the number of operators required for the traditionally labour-intensive task of inputting data. Three UK police forces are testing the system.

If the trials are successful, the system should be introduced nationally in 1998.

IT PROCUREMENT IN THE PUBLIC SECTOR

US system ensures up-to-date technology

From Page 15:

short and getting shorter, with price performance improving all the time. While everyone in the industry tries to predict what will happen, it is not easy to do so. The short development cycle impacts the street product in a very short time," says Jo Wright, IBM Director for UK government and public services sector.

On larger projects it is not unusual for it to take 18 months or more from invitation to tender to the contract being awarded. Fred Cahill, head of Unisys' UK public sector business says, "In that time you get into the mind set of the system proposed, and committed to what you've said. There's no way of changing the bid to reflect new developments."

Yet developments there will surely be. The TFPL report says that the length of time taken to make a decision on tenders often results in a project having to use a previous version of software, when the supplier is offering an enhanced version to commercial clients. The impact of long procurement cycles is acknowledged in the US where a fast track system was introduced for IT projects to try and ensure the public sector could buy the most up-to-date technology.

Another issue thrown up by the protracted procurement cycle is that it becomes too expensive to bid. According to the TFPL survey, the cost of bidding could be as high as 10 per cent of the contract value, twice the figure for the private sector. This cost of sale has to be set against the generally lower profit margins for public sector projects.

Mr White also believes that the tendency to award contracts to the lowest bidder is partly to blame for the high number of public IT projects that fail. "Problems arising from very large scale projects are probably inevitable when the initial contract has been bid low to gain the project."

Past failure makes public administrations and the IT industry nervous, leading to the use of established solutions rather than novel ones. "This means the public sector is limited to doing things in the same way, but faster, while experience from the private sector shows that IT can be applied to do things better."

Value for money

Ms Wright agrees. "It may be okay to chose the lowest bid for commodity goods, but there are not many commodity IT projects around. The question is what is value for money? The purchase price of a car is not how you decide what to buy, you also look at things like servicing costs, fuel consumption, environmental impact."

Suppliers are not saying that public sector procurement should not be open to scrutiny. "But there must be a way to balance the protection of the public purse with what's right for the public sector," says Mr Cahill. He believes that one exemplar of how public procurement could be improved is the UK government's Private Finance Initiative (PFI). The approach in these contracts is not to say, "Install a system using 'X' hardware and 'Y' software to run the income tax system"; but "We need a system that can process 25m tax returns annually, what do you suggest?" In such contracts suppliers bear the cost of installing the system and are paid for each transaction it handles.

"This gives suppliers the opportunity to bid the best technology available, and to change the business process to make it more efficient," says Mr Cahill. At present the cycle in PFI is slower than the conventional procurement process because there are more people involved in assessing bids, and the system is so new that all clients are doing it for the first time. "However, with experience it will speed up and PFI will be a driving force for change."

PROFILE: DAN BRICKLIN • Inventor of the spreadsheet

The software visionary

Dan Bricklin's killer application changed the way business works. But the innovator is not resting on his laurels reports **Geoffrey Wheelwright**

Dan Bricklin is a man whose whole life could have turned into an encore. Mr Bricklin, along with programmer Bob Frankston, created the world's first spreadsheet – VisiCalc – in 1979. It went on to become a huge success and is credited by many industry observers with being the driving force behind the sale of many Apple II computers into business. It was also the 'killer application' that spawned dozens of far more successful imitators, with the most notable being Lotus 1-2-3 and Microsoft Excel. Almost two decades later, Mr Bricklin is still widely regarded as one of the brightest and most inventive minds in the personal computer industry. He has not rested on his laurels and remains a strong creative force.

At Microsoft's recent Professional Developer's Conference in San Diego, for example, Mr Bricklin stood before thousands of enthusiastic programmers – some of whom had barely been born when VisiCalc first hit the computer industry – and unveiled his latest software innovation: Trellix.

This product is designed to be the first document creation system created solely with on-screen reading in mind. He contends that all previous systems – from word-processors to Web pages – have assumed users would print documents to read them. Software had to be designed to reflect that facility. But his new software assumes the document will be read on screen and provides many on-screen controls, including a 'document map'.

"Our industry is on the brink of a major shift to documents that are not only created on-screen, but also viewed on-screen without having to print them out," he says. "The program we have created works like a word processor, but each of the documents you make feels like a whole web site, complete with links, multiple pages and side-bars."

Mr Bricklin suggests that the challenge facing most users when viewing an on-screen document is one of navigation – "you don't know 'where you are' in the document."

The problem with most linked documents "is that you feel like a rat in a maze, without a picture of the overall design. That's why each Trellix document has a map. Each page in a document is represented by a little rectangular dot, with the page you're reading indicated by a yellow 'you are here' dot. To make the map as understandable as possible, we made it very free-form, with the pages anywhere you want, with text; shapes and images."

For Mr Bricklin, the answer for users is to give them the right tools to do what they want, without forcing them into a single way of doing things.

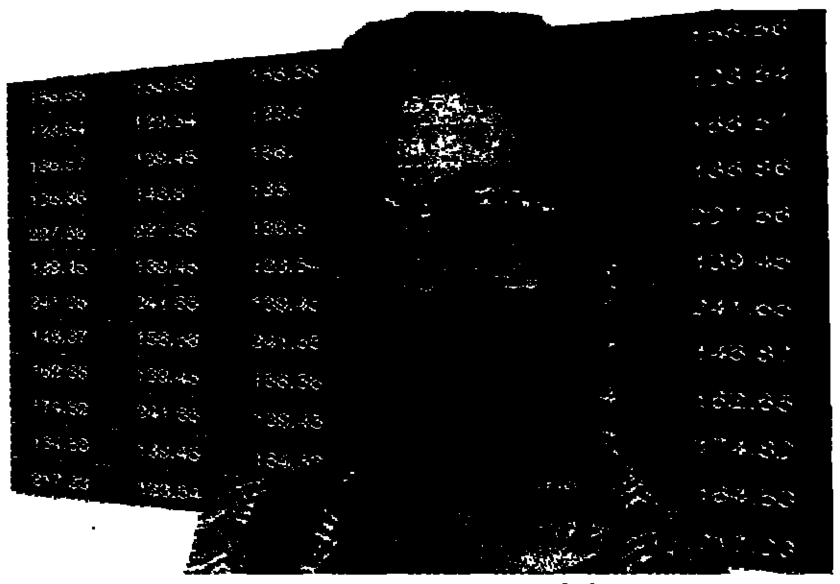
"When Bob Frankston and I created VisiCalc, the first electronic spreadsheet, we realised how important it was to let users build calculations which suited their needs," he says.

"That meant allowing the user to lay out numbers, create labels, and so on, without adhering to some pre-determined outline we had arbitrarily imposed. This made working with numbers accessible to all kinds of people – not just programmers and financial managers." He adds: "As we began developing Trellix, we wanted to create a product environment which would let users edit an entire hypertext document in a single, integrated package. It had to be more than just editing individual, linear pages and then linking them together."

For all his enthusiasm about Trellix, Mr Bricklin is aware that most people still think of him as the inventor of the spreadsheet – and will likely continue to do so. He also knows that many of his contemporaries – such as Microsoft chief executive and co-founder Bill Gates and Apple Computer co-founder Steve Jobs – have managed to build huge fortunes partially built on the success of Mr Bricklin's idea.

Developing new software ideas "is what I do," he says. "It's how I am 'wired'. I'm successful sometimes ... but you have to keep trying. You are happy when you see paradigms that you've developed catching on."

Knowing that he was the father to an entire sector of the software industry also appears to have left Mr Bricklin with a feeling that he did not have anything to prove to the world. "When I turned 40, I didn't have to ask: 'What am I going to do with my life?' It really makes me feel good [to see the success of the spreadsheet]. If you are a child of the 1960s, you want to change the world."



Bricklin: "developing new software ideas is 'what I do' – it's how I'm wired"

NEW AWARDS

An opportunity for innovative IT teams

British Computer Society invites entries for the 1998 Information System Management Awards

IT teams have just 12 days left to nominate themselves for the annual Information Systems Management Awards, organised by the British Computer Society, the professional body, in association with the Financial Times, *writes John Kavanagh.*

The awards recognise achievement, improvement and innovation in IS management in the UK.

The judges look in particular for impact on business performance, the relationship with end-users, and the management of development or operations, or both. The award typically goes to a team rather than an individual.

A simple nomination form is due in by December 15, 1997. Entrants are then asked to prepare a more detailed submission by January 31, 1998.

Selected entries are investigated by a panel, and three finalists make a presentation to a judging panel of senior executives.

The awards are presented at a prestigous dinner in May: speakers have included Lou Gerstner, IBM chief executive, and Sir Michael Heron, chairman of the UK Post Office. The sponsors are Blue Circle Industries, Deloitte & Touche, KPMG Impact, Unisys, and Woolwich. Past winners are London Ambulance Service, Eagle Star Life, P&O Ferries, Ford, Tesco and Cheshire County Council. Nomination forms are available from Maria Teresa Muir on +44 (0) 1793 417417; fax +44 (0) 1793 417432; e-mail *mtmuir@bcs.org.uk*

INTERVIEW: ERIC SCHMIDT, head of Novell

Focus on a networked world

The new chief executive of Novell, the networking company, talks to **Philip Manchester** about his ambitions for the company

Engineers do not get to the top too often in the dynamic, business-driven IT industry of the late 1990s. Eric Schmidt, who took over as chief executive officer at networking company Novell in April this year, is an exception.

With a university degree in electrical engineering and a PhD in computer science, Mr Schmidt has a long, illustrious career behind him – including spells at Sun Microsystems, Xerox Palo Alto Research Center (PARC), AT&T's Bell Laboratories and chip-builder Zilog.

He is realistic about his new role at Novell and suggests that what Novell – and many other established IT companies – really need now is a clear vision of the future. "Novell is a sound, mature business with \$1bn cash in the bank, and this a good reason why I might be the right choice. There a plenty of good people in Novell to worry about the day-to-day business. My job is to look ahead and build a strategy that takes Novell into the future."

This is a significant challenge. Novell is emerging from several years of uncertainty and a string of ill-advised acquisitions. Following its triumph in the 1980s as the personal computer networking market leader, it bought the rights to the Unix operating system from AT&T subsidiary Unix System Laboratories – only to see the Unix market falter as Microsoft's rival system Windows NT began to gather momentum.

Novell then bought out WordPerfect's office applications software – only to sell it on to Corel later. The acquisitions were, unsurprisingly, geared to making Novell a worthy rival to Microsoft in the PC software market. In reality, they served to divert it from its core market in networking – where it continues to outstrip Microsoft and just about everyone else.

Mr Schmidt says that the desire to rival Microsoft is now "history" and Novell will concentrate on what it does best – networking. Despite his engineering background, he may well be the man with the personal vision to realise Novell's new ambitions.

While at Sun, Mr Schmidt was chief technology officer and was the person charged with bringing the Java language out of the laboratory into the emerging world of the Internet. Java, now widely adopted by the IT industry, enables small programs to be distributed across the Internet and run

Schmidt sees 'the future of networking as very much the future of IT'

on virtually any computing device – from a mainframe or standard PC to a TV set or a mobile phone.

"Back in 1990, a few engineers at Sun led by James Gosling were looking at interoperable software for consumer devices and came up with the idea of Java.

By 1994, we saw that Java had a broader potential and decided to bring it into the Internet space. Marc Andreesen's Mosaic had just been launched and we saw a role for Java," says Mr Schmidt.

In his last year at Sun, he became the chief 'evangelist' for the Java cause and set about raising its profile by striking alliances with industry partners and ensuring that the development work moved ahead quickly.

The Java project has equipped Mr Schmidt well for his new role at Novell

Novell's top man

Eric Schmidt, born April 27, 1955. **Present title:** chief executive and chairman of the board.
Education: Mr Schmidt holds a B.Sc. degree in electrical engineering from Princeton University and a Ph.D. in computer science from the University of California at Berkeley.
Career: Prior to joining Novell in April 1997, he spent 14 years at Sun Microsystems. He joined as software manager and advanced to the position of chief technology officer in 1994. Prior to joining Sun, he worked at AT&T's Bell Laboratories and with the chip-builder Zilog, before moving to Xerox's world-renowned Palo Alto Research Center (PARC) as a researcher.

and allowed him to explore his ideas in networked computer systems. "Frankly, networking and networking services are the only area left where I think there is any real action now.

"According to analysts at IDC, there are about 4m servers and 60m desktop clients based on Novell's software – which means there are an awful lot of people using it.

"Now I want to take

Turn to back page

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● A preview to next week's Online information 97: London, December 9 - 11, 1997

Online comes of age

Once the exclusive preserve of corporate librarians, online information is now a vital business tool. Senior executives must absorb knowledge management into their corporate strategies if their businesses are to remain internationally competitive, and events such as Online Information 97 can provide a crash course on the services available to help them, reports **Tim Owen**

A decade ago, the profits from the largest online information provider in the world, Lexis-Nexis, would scarcely have bought an executive home in Surrey. Now online business information is big business itself, with an estimated total UK turnover of £243 million in the year to end-September, representing a 14 per cent increase on a year earlier.

Growth in conventional online use of business information was a modest 7 per cent between April and September, but in the same period access to the Internet by existing online business information users shot up by 17 per cent.

"Only 20 per cent of the information budgets for Internet use are controlled by information professionals," says Fred Hitchens of the Information Research Network consultancy, which compiled the figures. "Twenty six per cent are controlled by IT departments and 37 per cent by senior executives."

These untrained information users, who access databases to support their management decisions, are known in the trade as 'end-users'.

People in the information industry have been predicting the end-user revolution for at least 20 years, and it has been a long time coming.

But the spectacular growth in Internet use over the last couple of years seems to have turned it into a reality at last. "More than 90 per cent of respondents expect to increase the use of free and paid-for access to business information on the Internet," says Mr Hitchens.

Most end-users currently access the Internet directly, although 25 per cent use a local network and 15 per cent a corporate intranet. This percentage is sure to grow as more and more firms install networks using Internet protocols, and this will leave executives open to increasing risk of information overload.

Commissioned by Learned Information, the full IRN report, *The Impact of the Internet on the European Business Information Market*, is due to be launched at Online Information 97. This vast event is a combination of show case for the world's electronic information services and congress at which international representatives gather to confer on the issues facing the information industry and its customers.

Promoted by Learned Information, it is sponsored by the information industry's trade paper, Information World Review, and supported as well by the Financial Times.

The largest event of its kind in the world

Online Information 97 takes place at Olympia from December 9-11, and it is the largest event of its kind in the world.

Now in its 21st year, the event began as a small-scale exhibition and conference in a west London hotel. Since then, it has grown with the inexorable rise in the importance of electronic information services to business.

It eventually outgrew its Hammersmith venue and transferred in the early 1990s to Olympia 2. Now at its coming of age, it has expanded into the National Hall as well.

The exhibition features more than 300 organisations including such 'household' names as Dow Jones, Reuters, Bloomberg and Dun & Bradstreet, as well as hundreds more speciality electronic publishers and a growing number of niche providers. For, just as the Internet has opened up business information to end-users, so the economics of Web publishing allows small scale players to compete on a level playing field with industry leaders.

Much of this new information is free. Press releases, specialist newsletters and news wire services are increasingly available without restriction on the Internet, and accessible via a user-friendly interface that is identical no matter where in the world you use it.

Why should anyone purchase a company financial report from a proprietary provider when more and more public companies are posting their accounts on the Web? Why pay for regional economic data when it can be garnered freely from government sources? Why commission expensive market research when you can do much of your competitor intelligence by simply visiting their Web sites?

Online information 97

sponsored by

Information World

FT FINANCIAL TIMES

The revolutionary changes brought about by the Internet in a mere three years or so have caused turmoil in the information industry, and business customers are likely to be the main beneficiaries.

But information-users face their problems, too. No longer dealing with just a handful of competing proprietary information providers, they now have potentially thousands of niche operators from which they could take information, with little guidance on the quality or comprehensiveness of what is on offer from each.

At the same time, the mere presence of a PC with Internet access on an executive's desk can tempt the unwary into disastrously time-consuming fishing expeditions.

The conference's co-chairmen Paul Blake (editor of *Information World Review*) and David Raitt (editor of

This year's event is likely to attract more than 16,000 visitors to Olympia

The Electronic Library) sum up the dilemma: "The difference this time round," they say, "is that software vendors think they can cut out the human middleman and use technology to deliver precisely what end-users want."

But can they? IT solutions, such as push technology, merely add to the problem by loading end-users with more data than they can handle, and efficiency can suffer as a result.

In this context of rapid change in both the quantity and the accessibility of information, exhibitions such as Online Information 97 are of greater importance to business decision makers than ever before.

A briefing for senior managers

To accommodate this need, Learned Information has organised a crash course on the information industry for senior managers, at the London Novotel the day before Online Information 97 itself.

Designed as a curtain-raiser to the main event, this one-day executive briefing on corporate information resource strategies will cover issues such as avoiding overload and using information to establish competitor intelligence and source new business.

A session led by Paul Turnball of Ashridge Management College will help senior managers implement a successful information strategy, showing how they should look at information as a corporate asset and explaining how to carry out an information audit.

Other contributors will examine the costs and results of setting up successful information strategies and management systems. Speakers will also make clear the consequences of not having a strategic vision for internal and external information.

Alongside the main exhibition in the National Hall, the Olympia Conference Centre will play host to a three-day conference.

Knowledge management, push technology and the uncertain future faced by the online industry itself are among its major themes.

"This year, the emphasis of the conference has been radically altered to cater for the needs of both information professionals and the burgeoning audience of end-users," says Jill Cousins, the show's marketing director. "The programme we have developed features over 100 speakers and provides a forum for both the supply side of the online industry and the users."

Those users are facing problems undreamed of even a few years ago as their ability to access information far outstrips their capability to process it.

"Information overload generates stress in a number of ways," says psychologist Dr David Lewis. "There is the fear that a failure to understand critical information will lead us to make expensive mistakes. Then there is the threat of being overwhelmed by the sheer quantities of information that must be mastered if we are to do our job efficiently."

Stress is also caused by not knowing whether crucial information exists, or not being sure where and how to locate it, says Dr Lewis, a Fellow of the International Stress Management Association. "Finally, there is frustration stress caused when we know where some essential information is located but are not sure how to access it."

His remarks come in *Dying for Information*, a report commissioned a year ago by Reuters Business Information, which found 49 per cent of managers unable to handle the volumes of information they received, with 42 per cent believed to suffer from ill health as a direct consequence of stress associated with information overload.

Presenting new findings from the survey on the first day of the Online Information 97 conference, Reuters' Paul Waddington will no doubt point to the Reuters *Guide to Good Information Strategy* as a solution. Produced as a direct follow-up to *Dying for Information*, it includes case studies in effective information management from Sequent Computer Systems, Amerada Hess and Ogilvy & Mather.

Reuters is caught up as much as anyone, though, in the turmoil among online information providers over how best to leverage their offerings to secure maximum market advantage.

Reuters' strategy has been progressively to withdraw its Textline service from other online hosts, increasingly forcing end-users to sign up with Reuters Business Information if they want to continue accessing Textline's comprehensive business and industry news archive.

Financial Times Information and Dow Jones also withhold the electronic versions of their flagship FT and Wall Street Journal newspapers from other information providers. In addition, these two players announced a year ago that they were teaming up with a third global online provider, Knight-Ridder Information, to create a brand new online business news service, countering Reuters' dominance in this field.

Rolled out by the three partners last September, their World Reporter database aims to cover some 500 publications by next July, with a projected annual output of 2.2 million articles and special emphasis on emerging markets.

But the entire landscape of online business information was changed dramatically last October with the announcement by MAID plc that it was to be the purchaser of Knight-Ridder Information, one of the three World Reporter partners and the owner of the long established Dialog and Data-Star services.

The acquisition, which was finally completed on November 14, pushes the new Dialog Corporation to the top of the heap, with an estimated 25 per cent share of the online business information market by revenue, nudging Lexis-Nexis into second place with 24 per cent and leaving Dow Jones with 9 per cent.

Dan Wagner, the colourful founder of MAID, author of the Knight-Ridder deal and now chief executive of the new Dialog Corporation, opens the conference with a keynote speech on the context of the online industry over the next two to three years as we approach the millennium.

Few are better qualified to do it. Over the years, MAID has been a consistent innovator, being one of the first to integrate its collection of publications behind a single search screen, as well as a pioneer Windows interface provider and the first to demonstrate the commercial viability of the Internet for business information.

"We are on the brink of an information explosion that will make the Big Bang sound like a muffled pop," Mr Wagner told the Institute of Directors last spring. "But unlike Big Bang, it won't happen on a specified date so that you can be prepared for it. It will creep up on most of you like a deadly assassin and strike when it will already be too late to react."

Visits can be carefully planned

Visitors to the Online Information 97 exhibition can avoid the risk of 'assassination' by following one of the show's Information Trails.

"We're expecting more than 16,000 attendees during the three days of the show," says Learned Information's Jill Cousins. "Coupled with our new location in the National Hall and Olympia 2, this was the ideal time to ensure that visitors are able to identify and locate the exhibitors and products they wish to see whilst touring the event – and to plan their visit in advance."

Colour-coded rosettes identify the exhibitors' specialities – yellow for corporate and financial information; mauve for news and media; green for legal and government.

Others pinpoint providers of information management solutions and electronic publishing services, for the Internet revolution means that all information users can be providers, too.

Presentations on knowledge management

Product presentations also run every 15 minutes throughout the three days in the show's press office and – such is the demand – a second theatre on the exhibition floor will be dedicated exclusively to presentations on knowledge management.

"Knowledge management is rapidly moving into the centre of every corporate agenda," say the conference's co-chairmen David Raitt and Paul Blake.

The conference includes knowledge management strategy sessions from Professor Clive Holtham of the City University Business School, as well as David Best of consultant Deloitte & Touche and Alan Lloyd Paris of Coopers & Lybrand in the US.

Presenting a paper called *Knowledge is about People: Information is about Systems*, Rob Welch of the Kudos Partnership makes clear that IT is not the solution to knowledge management problems. "Those who tell you that all you have to do is 'model your processes in software' or 'put all your knowledge on Notes or the intranet' have missed the point," he says. "Technology is simply about how things are delivered; knowledge management is about what is delivered."

New products to be launched at Online 97

Specialist knowledge management information providers will be launching a range of new products at the show. Dataware Technologies are planning a launch of Dataware II, an integrated professional publishing system used to organise large collections of information for publication on the Internet, intranets or other client-server networks.

So crucial is the issue of knowledge management for corporate survival that Learned Information will be running a special two-day knowledge management event next April, bringing IT and information managers together with vendors and suppliers to discuss the implementation of knowledge management systems.

Specialists on the Year 2000 problem

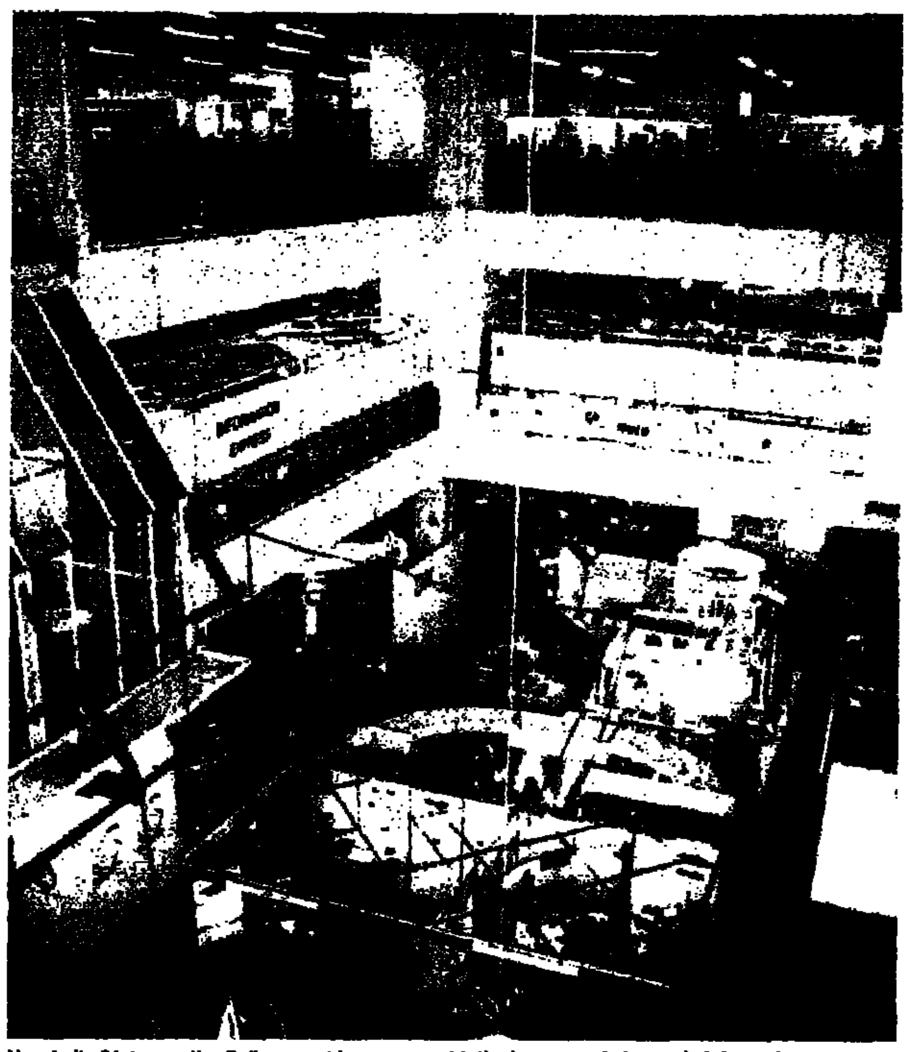
Satellite events take place on the days either side of the December conference, including sessions on the effective delivery of training over the Net, using the Internet as a source of competitive intelligence, and the effects of intranets on business information users and their workflows.

And right in the middle of the main conference, a group of leading information industry specialists will get together for a remarkable lunchtime meeting to discuss their preparations for the Millennium Bomb.

Sponsored by Lexis-Nexis Europe, the event includes contributions from Dun & Bradstreet, FT Information, Perfect Information and Reuters' Millennium Programme.

No corporate information strategy can ignore this year's other industry buzzword – push technology. Put simply, it means that managers no longer have to go actively looking for the information they need for decision making. Instead, they tell "intelligent agent" software what sort of information stream they are going to need to do their job and the agent scours the world's databases, bringing back relevant material.

The idea is that the agent becomes progressively better, learning more about the user's requirements from the items actually selected for viewing and bringing back material of increasing relevance as a result. However, the reality can fall far short of the ideal and, far from assisting with information overload, push technology can actually add to it.



Now in its 21st year, the Online event has grown with the increase of electronic information services in the business world. This year the event has expanded to the National Hall at London's Olympia

In a paper to the Online Information 97 conference called *Preparing for Intelligent Push/Pull: Structuring Data for Relevance*, Derek Sturdy of Legal Resources Ltd warns that effective push applications will only come – "as those of us who suffer from current push technologies know only too well – if the irrelevance issue is handled extraordinarily well."

Uncritical proponents of push have hailed it as marking the end of the information intermediary – the corporate librarian or information manager who seeks out data on decision makers' behalf.

One of three contributors to a special session at the Online 97 conference on push technology, Don McLagan, chief executive of real time news provider Desktop Data, hints firmly that 'push' is too crude a solution. "Place, not push" is what is needed to drive information to the desktop, he will tell the conference.

Jeff Galt, the former president of Knight-Ridder Information and now executive vice president of the new Dialog Corporation, agrees. "There is tremendous hype surrounding the concept of push and the new generation of online companies offering these services," he will tell the conference. "Ultimately, however, these services are going to benefit the online hosts, because they will simply drag demand for archival services."

Content versus price is the key dilemma for information providers and users alike. All the leading content providers have either launched or are developing push products based on their proprietary data, but it remains to be seen whether user perceptions of the quality of the information they offer outweigh the relatively high cost of maintaining and accessing it.

The pricing issue: Who has a clue?

Just as electronic commerce developments have done with bookselling, so the Internet has turned all conventional notions of information pricing on their head. The Online Information 97 conference will devote an entire session to the topic, under the heading 'Pricing – who has a clue?', while another will look at the need to develop new revenue models for Web publishing.

There can be little doubt, however, that market pressures will drive down the price of information, in a way that could benefit both producers and users.

Uncertainties remain over how quickly British business will respond to the opportunities offered by the information revolution and turn them to competitive advantage. "US companies are significantly ahead of their UK competitors in the utilisation of information as part of their business armoury," Dan Wagner told the IoD convention last spring.

"More than 70 per cent of the top 1,000 US companies have adopted knowledge management strategies and are actively using them to further their businesses. This compares to only 15 per cent of Britain's top businesses."

How quickly this situation improves will depend partly on the business decision-makers who make the trip to Olympia between December 9th and 11th. There, they can see the biggest collection of online information products gathered together under one roof anywhere in the world, and choose from among a hundred or more presentations from high profile speakers. After that, Mr Wagner's advice would be: "Go back to your offices, find out about your internal knowledge management strategy and determine if it is fit for the future."

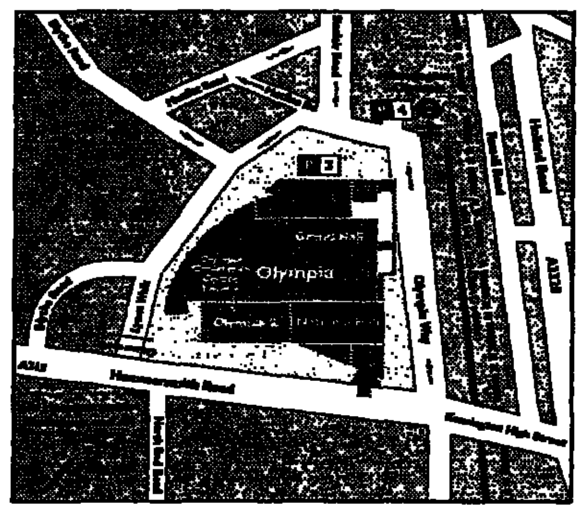
The writer, Tim Owen works for the London Research Centre but writes here in a personal capacity. He also contributes regularly to Information World Review and is the editor designate of Business Information Review.

Exhibition Opening Times

Tuesday 9 December 1997	09.30-18.00
Wednesday 10 December 1997	09.30-18.00
Thursday 11 December 1997	09.30-16.00

The Venue and how to get there

The **Online Information 97** Exhibition this year takes place in The National Hall & Olympia 2 in London.



You can pre-book car parking at either of these car parks using Visa, Access or American Express. Call 0500 845 800 (calls to this number are free).

By Train
There are direct connections from the UK's major towns and cities, via BR Intercity, to all London mainline stations. All stations have connections, and both Kings Cross and Victoria Stations have direct tube links to Olympia, via Earls Court.

By Tube
District line train services stop at Kensington Olympia station. For more information call 0171 222 1234.

By Car
The National Hall is situated on Hammersmith Road within easy reach of the M4, M40 and M3. There are 16 car parks in the vicinity including Olympia Way, Warwick Road and Kings Mall, Hammersmith. If you require further information on parking in the area, call NCP on 0171 404 3777.

Disabled access available. Please contact the organisers at the address below for help on this matter.

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INTERVIEW: KEITH TODD OF ICL • By Philip Manchester

Adapting to new world markets

Keith Todd is bringing fundamental changes to ICL, the IT systems and services company. Businesses and consumers, he says, must take a more global approach

When Keith Todd took over the hot seat at ICL, from Sir Peter Bonfield a couple of years ago, the UK-based computer company was a model of 1980s management thinking - decentralised autonomous business units acting independently.

Mr Todd's main task was to re-model the company based on the changed dynamics of the IT industry. He says the company has been transformed as a result.

"ICL has been totally re-invented as a software services company. The world we are moving into has changed so now we have no factories and we are concentrating on leveraging our intellectual capital. We have had New Labour and New Britain – now we have New ICL."

Mr Todd's approach to re-engineering ICL has its roots in what he sees as a fundamental re-invention of society as a result of convergence between computer and telecom technologies – "I think it's as profound as the extinction of the dinosaurs or the Berlin Wall coming down."

He adds that there are four driving forces causing change – the advent of low-cost communications, globalisation, de-regulation and the growth of open systems. As a result, business is being forced to change. "The boundaries are coming down between industries, so you see companies moving into new areas. We are moving towards a time when brand names will be a symbol of trust. And the relationship between companies, their suppliers and their customers are changing."

He adds that it is important that companies do not lose sight of the need to re-engineer against a background of changes such as Year 2000 and European Monetary Union (Emu). "Year 2000 and Emu are very important issues and cannot be ignored. But they must be put in context. Companies must ensure that they think about how their business is changing at the same time. It is the same with government. "We are moving into an age when the old-fashioned 'silo approach' to government with lots of independent departments must be replaced with a structure that sees the citizen as the customer."

Mr Todd notes that governments must work to change people's view of technology and how it can be used both in commerce and providing government services. "It is easier to change the technology than to change people's mindset. And we must not forget that IT is exciting and fun: it is not only a case of making work *different*, but also of making it more fulfilling."

Mr Todd says that one of the best ways to achieve this is to exploit information technology by turning it into knowledge management. He heads up a group of companies – including ICI, Nestle, Unilever and Monsanto – in the Knowledge Management Consortium which aims to discover the best practice in knowledge management.

"We are not talking about data or even information – but leveraging the power of knowledge. Most organisations have the knowledge, but it is isolated in islands. We need to build bridges. I want every ICL employee to have access to the same knowledge as I have. Then they are empowered to do their job better. I think if you don't do this, then your company could be in trouble."

The retail sector is where he sees the first signs of the "fundamental change" that is shaping the future. Traditionally strong in the retail sector, ICL is in a good position to see the effects at first hand. "There's a revolution happening in retail now. We are experimenting with home shopping in Reading with Waitrose supermarket and learning some important lessons. Each week we buy 80 per cent of the same goods we bought last week – and that is where home shopping can score. But people still want to go shopping."

He sees retailers changing the whole retail experience to reflect this. Large stores are, he says, integrating shopping with entertainment, offering attractive loyalty schemes and finding many new ways to attract customers. His main worry, however, is that these changes are in danger of fragmenting society. "It is important to include everyone in the revolution because there is a danger that some will be excluded. We have been working with government to help educate people so they are prepared for the changes to come."

He points to Finland as an example of a country that appears to be getting it right. "The Finns have a very advanced infrastructure and are ahead of even the US in Internet penetration. They seem to have combined technology infrastructure and aptitude well. The rest of Europe can learn from this – and I think the EU must push the information society more – indeed its own organisation could become a showcase for this."

ICL, he says, has been re-aligned to exploit the new environment. Ironically, the main resource pool he wants to use to achieve this is ICL's human resources. "I prefer to call it 'people capital'. We are moving into a new age of capitalism where people's talents and knowledge can be exploited through technology. Certainly you need the technology, but you also need the right combination of culture, mindset and training."

Mr Todd aims to bring ICL back to the Stock Exchange for a full listing as soon as possible. "The reason I feel so good about ICL now is that we understand the market and we have avoided becoming complacent. A re-listing will be a defining point in ICL's history – it will legitimise all of the re-organisation that we are doing at the moment."

It is a daunting task. ICL has moved on from the days when it was a well-protected national institution that could expect a lucrative, captive business from government departments and companies that did not want to 'buy American'. Its current Japanese owners, Fujitsu, have provided it with a strong base to work from – and ICL still has a solid foothold in the old Commonwealth countries. The combination gives it a foundation to build an international business and compete with other global companies.

ICL's top man

Keith Todd, chief executive of ICL, was born in Glasgow, Scotland, on June 22, 1953.
He trained as a chartered management accountant.
Career: Prior to joining ICL, Mr Todd was financial director of the Marconi Company. This followed a five-year period in the US as chief financial officer of Cincinnati Electronics. Before going to the US, Mr Todd held various financial positions with GEC at the Marconi Space and Defence subsidiaries. He also worked for the UK government as an executive officer with the Royal Ordnance Factories.
Other activities: Mr Todd is ICL's representative on the board of Camelot Group, the consortium chosen in 1994 to run the UK Lottery. (ICL is a 10 per cent shareholder in Camelot).
In January 1992 he joined the Council of the Open University.


Todd: 'The company has been transformed'

BUSINESS ONLINE

China's first steps towards electronic commerce

From Page 7:

tors, who demand equal access to accurate market data and analysis. Several traditional modes of real-time data retrieval already exist – through ChinaPAC, paging, CDPD, and CATV/Videotex – as do remote transactions based on phone lines and dedicated lines.

Nearly 10 ISPs offer real-time market data online, and they compete with each other to bring the first Internet trade network of stocks into reality.

In addition to the various electronic commerce services available to the public through the Internet, many leading companies have already started to build Intranet and extranet systems to link divisions and business partners so as to enable integrated supply chains and manufacturing systems.

The pace of electronic commerce development in China will be measured not in years, but in months and weeks.

China is not alone in its electronic commerce practices. Constraints in electronic commerce for the rest of the world – lack of an integrated payment system, authentication and delivery system problems, limited bandwidth, concerns over privacy and security, and the under-development of electronic commerce web hosts – also apply to China.

Furthermore, China is confronted with unique challenges. These are: uncertainty around regulating telecommunications as a whole; the lack of mature banking systems and a low penetration of credit cards; issues surrounding control of the foreign exchanges for international transactions; rigid Internet connections; hosting and usage costs; and the language barrier facing the average Chinese users of the web browser.

Consequently, global companies are unsure of the viability of electronic commerce initiatives in China. Compaq and Dell maintain that they will continue to sell the bulk of their computers through the traditional reseller route in China, rather than promote direct sales through the Internet.

It may take a while for China to develop a formidable level of electronic commerce. However, some positive signs have already appeared.

First, the convergence of electronic devices for consumers will be put gradually in place. Internet delivery systems based on CATV fibre or HFC cable networks and cable modems to enable VOD, home education and tele-medicine are being developed.

Chengdu and Shenzhen are testing set-top devices. These moves illustrate the potential for electronic commerce to penetrate the consumer market.

Second, the People's Bank of China, China's central bank, along with large commercial banks, have been developing extensive national clearing systems. In addition, the bank and Visa International are developing Chinese banking card standards, including those for Internet compatible cards. These will likely be finalised by the end of 1997. MasterCard is also actively promoting its Mondex card system in China.

Furthermore, independent ISPs in China have started to develop payment and authentication systems to enable Internet-based transactions, using credit cards issued by large Chinese commercial banks.

Under a separate development, various Chinese and multinational couriers and freight forwarders, including Chinese Express Mail Service, USPS and FedEx, plan to unveil Internet related door-to-door delivery services.

All of these facilities will help set the ground work for integrated solutions and open a new era for electronic communications across China.

Third, the creation of the China National Internet Information Centre (CNNIC), and the formation of national ISP alliances, signify cohesive actions among fragmented government entities and Internet companies. This will develop the Internet and electronic commerce markets in the same direction.

Internet-based electronic commerce has proven to be cost-effective in the exchange of data, knowledge, products and capital,

> 'The pace of e-commerce development in China will be measured not in years, but in months and weeks'

and it is advancing in China at almost the same pace as that of the rest of the world. While several big hurdles remain before mainstream acceptance occurs, opportunities exist for multinational companies. Global market leaders should pay special attention to the developments in China and find a way to participate in the formation of industry standards and business models for electronic commerce.

First, it is imperative that international companies establish a visible presence in the Chinese electronic commerce marketplace. This can be done by setting up a China-specific foothold on the Web, by educating Chinese consumers, and by being proactive about emerging market opportunities.

Current problems will be remedied if the Chinese government – and IT industry leaders, as well as global companies – share their expertise to encourage China's electronic commerce. With continued commitment, Internet electronic commerce will have a bright future in China.

The writer, Dr Denis Simon, director of Andersen Consulting's China Strategy Group, joined the consultancy after a distinguished academic career. His expertise is in international business strategy, global technology management, and Asian technology and business affairs.

ERIC SCHMIDT

Novell's strategy

From page 18:

Novell into the Internet/intranet space," he says. He sees the future of networking as very much the future of IT and suggests that it is also the future of commerce. "The more businesses get connected to the network, the more new things they can do and the more important it becomes to business.

"The outcome we want is to make networking easy enough for users to do anything they want from their desktop."

The two main technology drivers, says Mr Schmidt are increasing power of computer processors and increasing bandwidth for telecommunications.

He adds that there is still plenty of scope within the physical limitations of current technology. "As far as processors are concerned – Moore's Law still holds, and power can be expected to double every year for 15 or more years – taking us to 2010 and beyond. And bandwidth is also doubling every year. This means we are heading for a highly interconnected world."

Unlike many of his peers, Mr Schmidt does not appear to be intimidated by Microsoft's dominant position and sees plenty of opportunities for other IT companies to grow and thrive in the networking market. "Microsoft has a monopoly on the corporate desktop – but this is only part of the story now. Look at the cell-phone market, for example. The first advanced cell-phones are just beginning to come to market – and they will create a much larger market of smaller devices. This is where I see great opportunities for us and Microsoft's other rivals."

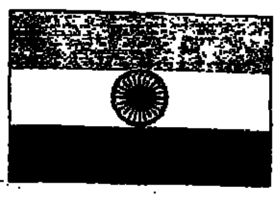
Inevitably, Java has an important role to play in Mr Schmidt's strategy for these new markets: it offers, for example, the mechanisms to turn a humble cell-phone into a fully functional Web browser which could bring a large constituency of new users to networking.

"Java replaces static networking with dynamic networking – which opens up a whole box of surprises. None of us is really smart enough to know what all of the implications are this early in the cycle – but it certainly changes the rules. It's rather like a new mathematics where one plus one equals three," he says. "The more people use networking, the more valuable it becomes."

If anyone can make sense of this 'new mathematics', then Mr Schmidt can. His unusual background – both as an engineer and as a market visionary – would appear to equip him well.

India's Software Industry

Financial Times Review of Information Technology



SPECIAL REPORT

This second section of the December 1997 issue of the monthly FT-IT Review examines India's increasing influence as a leading offshore software development centre.

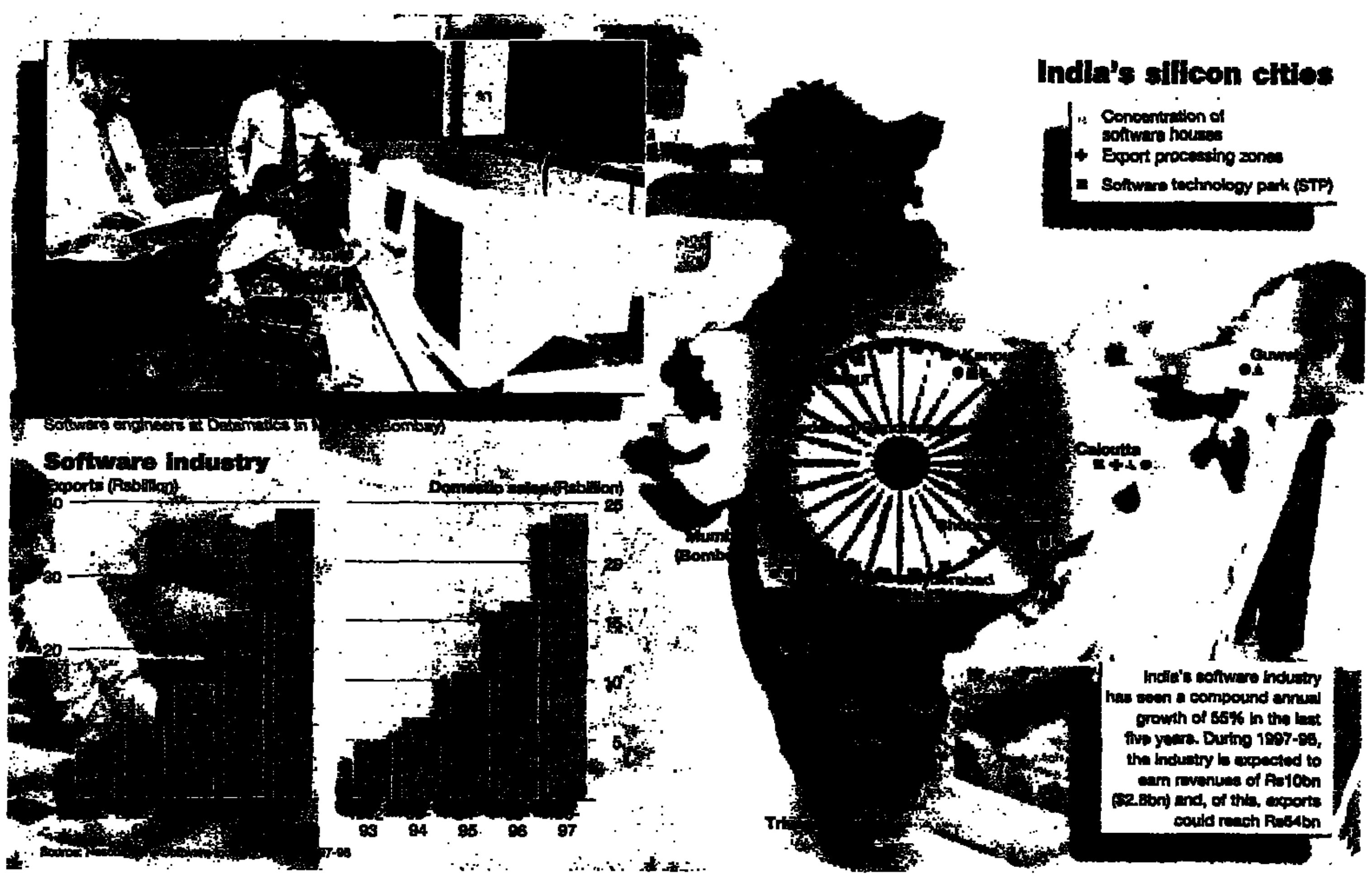
India's software export industry, now worth more than $1.76bn a year and employing 260,000 people at home and abroad, has become one of the most dynamic sectors of the Indian economy. The industry's confidence is fuelled by the needs of offshore clients for relatively low-cost but high-quality products and services.

IN THIS REPORT

Editorial production: **Michael Wiltshire and Caroline Allen**

Poised for global growth

Many US and European companies are outsourcing their IT work to Indian companies offshore, reports Paul Taylor



Software engineers at Datamatics in [illegible] (Bombay)

India has emerged as a leading offshore software development centre in little more than a decade. This achievement has been made possible by domestic deregulation, entrepreneurial flair and the soaring global demand for high-quality, low-cost software and services.

For India, which celebrated 50 years of independence this year, the software industry has become a beacon of success. It has proved that, given the right framework, India can compete globally.

"The software industry has emerged as India's only globally competitive modern industry," says Ajay Malpani, an analyst with Bombay-based Caspian Securities. This fact will be evident at this week's Comdex show in India.

Now, flush with this renewed confidence, India's leading software companies are poised to take the next step towards becoming an important force in the global software and services industry in their own right.

The success of India's software development industry reflects a number of factors. In particular, faced with a growing shortage of software engineers in the west, hundreds of companies have turned to India's computer software and services companies for the IT skills they need to maintain and enhance their competitiveness. Some, including many leading American IT companies, have become big employers of Indian software professionals. For example about 10 per cent of Microsoft's 20,000 worldwide workforce is Indian. Other IT companies, including market leaders such as Texas Instruments, Motorola and Oracle, have established captive research and development centres in India.

Many other US and European companies, including those in the financial services, manufacturing and utilities sectors, have begun to outsource their IT work to Indian companies offshore. These outsourcing contracts range from code maintenance and migration work through to designing and building new customised applications using the latest technologies and techniques.

Most leading Indian software companies have already forged strong partnerships with their overseas and domestic customers. Many have established sales offices and subsidiaries in the US and Europe. Some are preparing to seek listings for their overseas subsidiaries in New York or London.

For example, HCL, the leading Indian IT group led by Shiv Nadar, now has operations in 18 countries and plans a Nasdaq flotation next year to raise funds for overseas acquisitions as part of a strategic plan to turn the group into a $1bn software and services company serving global clients.

"There are very few companies who can offer these services globally," says Mr Nadar.

Other Indian entrepreneurs have established computer services companies overseas, for example companies such as US-based Mastech and UK-based Gulf Computers have grown rapidly by offering managed offshore services to their western clients. Such moves reflect the maturation of the Indian software industry. And there is growing confidence among leading entrepreneurs that, even though Indian software exports still account for only a small fraction of the global $300bn to $400bn software market, they can compete not just in terms of price, but on the basis of quality, innovation and technical expertise.

India's leading software companies have overcome the credibility hurdle and now have the critical mass needed to move up the value chain in terms of both software services and products. Companies such as HCL, Tata Consultancy Services, Wipro and Infosys Technologies believe they can compete on equal terms with the best product designers, project managers and software developers in the world.

"Trade in the developed world is moving towards services," says D S Kanodia, chairman of Bombay-based Datamatics and one of the fathers of the Indian software industry. "Our expertise is in the delivery of services, I think we can beat the world in services."

Today, Indian software companies sell their services to an expanding international customer list which includes Japanese, South Korean and South-east Asian clients, as well as those from North America and Europe, on the basis of quality, speed and reliability, innovation and skills as well as price.

That this should have been achieved in a developing country still struggling with a wide range of infrastructure and other problems is a remarkable achievement. It is testament to the determination of the architects of India's software success story.

"There is a tremendous amount of confidence around," says Pradeep Gupta, managing director of International Data Corporation's Delhi office. "We feel very proud of our country and what the industry has achieved." Highlighting this, the industry grew by 50.6 per cent in the year to March 31, posting total turnover of Rs63.1bn or $1.76bn, according to India's National Association of Software and Service Companies (Nasscom). Five years ago, the industry was worth a mere Rs11.6bn or $388m.

Between 1991/2 and 1996/7, the Indian industry, which comprises more than 730 companies, grew at a compound rate of almost 53 per cent. It now employs at least 160,000 people in India (a further 100,000 Indian software engineers work overseas). This is much faster than the worldwide industry as a whole.

As Dewang Mehta, Nasscom's executive director has noted: "The software industry is increasingly becoming the driving force in the IT industry. It is particularly suited to India [since it is] people rather than capital intensive; it demands highly skilled young people; it has no undesirable environmental side effects; it is growing rapidly; and unlike capital intensive, low-skill industries, investment in this industry is not easily displaced."

India's success and its ability to outshine rival offshore software development centres including China, the Philippines and eastern Europe – at least for the time being – reflects a number of factors. In particular, India has a huge pool of relatively low-cost, technically qualified and English-speaking software professionals.

India has the second largest English-speaking scientific manpower pool after the US, and a sophisticated higher education system that produces a stream of qualified graduates. This pool of skilled, ambitious but low-cost manpower has helped underpin the rapid growth of the industry – and particularly exports.

Continued on back page of this software review

SOFTWARE EXPORTS • By Paul Taylor

An industry on the up and up

Indian companies continue their efforts toward becoming providers of higher value-added services to their overseas clients

India is making step-by-step progress towards its rightful place in the rapidly expanding global IT industry. This is thanks mainly to the software exports produced by its well-educated, highly motivated and relatively low-cost software professionals.

"India is unique in that it has a very highly educated population," says L S Kanodia, chairman of Datamatics and one of the fathers of India's software revolution.

"The other great plus from the international point of view is that India is English-speaking in contrast to China and other countries."

Driven by the demands of offshore clients for low-cost, high-quality products and services, India's software export industry has become one of the most dynamic sectors of the Indian economy.

It has also become a valuable foreign exchange earner, an important source of new professional jobs and the model for economic success after deregulation.

Meanwhile in the US, Europe and now Asia, a growing number of companies in the financial services, retail and manufacturing sectors, are becoming dependent on Indian technical know-how.

Indian software engineers maintain and update systems to help companies in the developed world remain competitive and react quickly to commercial opportunities.

The remarkable success of the Indian software export sector since the mid 1980s is reflected in annual figures prepared by the National Association of Software and Services Companies (Nasscom).

In 1985, Indian software exports were worth just Rs30m but had grown to total Rs39bn ($1.1bn) last year. Nasscom expects export revenues to be worth $1.8bn in the current year and to reach $4bn by the end of the decade.

Overall, software exports have been growing by more than 55 per cent annually over the last five years and the pace of growth shows no signs of slackening.

The businesses responsible for this achievement are a diverse mixture of new start-ups, joint venture companies, foreign implants and spin-offs from some of India's oldests and most well-established industrial groups.

According to the Nasscom, there are more than 550 companies in India involved in software exports (another 180 small companies collectively account for revenues of less than Rs100m).

World software market

India's share	US$m 1995	US$m 1999
Worldwide services outsourcing revenue	20,065	32,514
India's software exports	700	2,000
India's software exports (as % of worldwide outsourcing business)	3.4	6.1

Source: IDC

Together, these companies employ about 160,000 software engineers – the second or third largest group of software professionals in the world, depending upon Russia's ranking.

However these companies vary dramatically in both size and structure.

Last year, 52 companies exported more than Rs100m worth of software. This is compared with just five in 1991.

Meanwhile, reflecting the growing stratification of the industry, the top 20 exporters, which include companies like Tata Consultancy Services, Wipro Infotech, NIIT, Pentafour and Infosys Technologies, accounted for almost 60 per cent of total exports.

Typically individual companies and emerging industries in developing countries like India move through at least three distinct phases as they enter new export markets and begin to climb up the value chain.

They begin by exporting cheap labour overseas or "body shopping". This phase, which the Indian software industry entered in the 1980s, enables companies to build credibility with potential clients, and while margins in exporting cheap labour may be thin by international standards, low manpower costs mean exporters can still achieve healthy profits.

"The Indian software industry has been built on low cost labour," says Pradeep Gupta, managing director of International Data Corporation India, the market analysts.

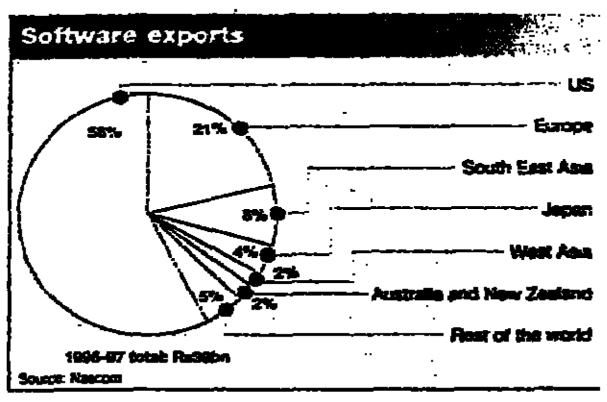
Secondly, they begin to bring work back to their home countries using cheap labour to provide offshore services. This type of contract or project-based work eliminates costly travel and helps build the local infrastructure.

In this phase, many Indian companies have established "software factories" or units dedicate exclusively to a single client. These high-security units – for example, those established by companies such as NIIT, Wipro Infotech, BFL and Madras-based Square-D – ensure confidentiality for long-term partners and operate as extensions to their in-house development teams.

Satellite communications remove distance as an obstacle to doing business. India's geographic location means global development teams can operate round-the-clock, passing work from one site to the next.

The next phase is to build packaged software products for export overseas, or provide high value-added services such as consultancy and systems integration. These are the highest margin businesses in the global software industry and the longer-term goal of most companies in India as elsewhere.

Software exports



1996-97 total: Rs39bn

Source: Nasscom

However, the packaged software business in particular requires more initial capital – which is in short supply in India – and is much more risky than contract work. Successful products also require good market understanding and hefty marketing expenses which offset the cost advantages of developing software packages in a developing country.

Today, most Indian software exporters still undertake contract work for their overseas clients – maintaining applications, converting code or migrating software from one platform to another. This supply of professional services in the form of customised software or professional consultancy is the bread and butter work of the industry. However, whereas the vast bulk of this work used to be done at the customer's site, a growing proportion of it is now being carried out offshore in India.

According to Nasscom, the proportion of work undertaken for customers on-site has fallen from more than 90 per cent at the start of the decade to 58 per cent today.

This shift reflects both the desire of Indian companies to capture more of the value added in their work, and the growing confidence of multinationals in the ability of Indian software companies to deliver high quality products and services on time.

At the same time, instead of limiting themselves to supplying basic data entry and code-bashing services, companies are undertaking more challenging work for their overseas clients or parents, including full-scale projects from design to testing and delivery.

Most of the larger Indian companies are also expanding their international presence. They are setting up offices in the US, Britain, continental Europe and now in South-east Asia and the Far East.

The objective of overseas offices is to win new business and build relationships with offshore clients. As one industry leader put it, the offices are "helping to raise the comfort level with Indian outsourcing".

Some are also beginning to look for partners in neighbouring countries like Pakistan, Bangladesh, Nepal and Sri Lanka. This raises the possibility that the Indian software industry could become the centre of a regional hub.

Big 31 software exporters

Company	1994-95	1995-96	1996-97	Growth %*
Tata Consultancy Services	2,880	[illegible]	[illegible]	44.4
HCL Corporation	-	2,700	5,300	96.3
Wipro Infotech Group	986	1,636	2,566	57.9
Pentafour Software & Exports	553	1,020	1,594	56.3
Infosys Technologies	[illegible]	[illegible]	[illegible]	85.5
Tata Infotech	825	940	1,060	12.8
Datamatics	-	680	986	45.0
Satyam Computer Services	330	505	891	76.6
International Computers (India)	-	680**	886	30.0
Patni Computer Systems	-	560	848	51.6
Silverline Industries	-	916	769	-11.8
DSQ Software	382	621	677	9.0
Tata IBM	332	386	649	67.4
Mahindra-BT	247	386	604	56.4
Mastek	176	316	576	82.1
Siemens Information Systems	219	368	554	50.8
L&T Information Technology	208	[illegible]	[illegible]	38.6
Information Mgmt Resources	320	480	496	3.6
Hexaware Infosystems	182	294	484	64.3
Citicorp Information Tech Ind.	176	311	470	51.3
Dun & Bradstreet Satyam	88	301	469	55.9
Hewlett-Packard ISO	-	190	439	131.2
Pertech Computers	71	380	367	-3.7
CMC	142	271	342	26.2
Digital Equipment	439	387	361	-7.2
Motorola India Electronics	-	-	326	-
Rolta India	-	330	326	-1.0
Citicorp Overseas Software	287	270	325	20.5
Hughes Software Systems	-	254	312	22.7
BFL Software	-	199	307	54.3
NS Infotech	229	339	307	-6.8

* % growth in 1996-97 over 1995-96 ** As Fujitsu-ICIM

Source: Computers Today Magazine

DOMESTIC IT MARKET • By Paul Taylor

The house is built – now to furnish the interior

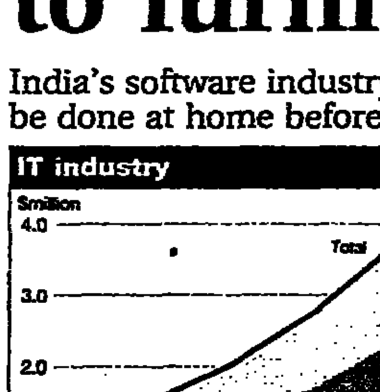
India's software industry is gaining strength abroad, but there is still work to be done at home before the domestic market will have similar successes

By most measures, India, for all its success in software design and engineering, remains relatively impoverished in terms of IT infrastructure and deployment.

With just 1.5 telephones per 100 people, India has one of the lowest fixed telephony penetration rates in Asia. The installed personal computer base in a nation of over 1bn people stands at just 1.8m units. Most segments of India's antiquated public sector have yet to embrace technology despite the dire need for reform.

The slow pace of technological change has already forced some multinationals to re-evaluate their direct investment strategies and scale back their expectations. Nevertheless, despite a recent economic slowdown, there are some indications that the climate for the domestic IT industry may be improving.

IT industry



$m	1992-93	93-94	94-95	95-96	96-97
Hardware					
Domestic	370	480	590	1,037	1,050
Exports	52	93	177	95	340
Software					
Domestic	163	230	350	490	670
Exports	225	330	485	734	1,085
Others	207	233	297	435	478
Maintenance	90	117	142	156	182

Source: The Software Industry in India 1997-98

In India's main cities –Bombay, Calcutta, Madras and New Delhi – GSM mobile telephones have become must-have items for India's large and growing middle classes. Motorola manufactures pagers at a plant near Bangalore. It predicts that 10m pagers will be in use in India by the year 2001.

Although local businesses complain that new lines still take far too long to materialise - even when bureaucratic wheels are oiled with the usual bribes – the fixed telephone system is showing some signs of improvement.

As import duties have been cut and tough new copyright laws enacted, pirated software has been replaced with strong sales of legitimate packaged software. Companies like Microsoft, Symantec and Adobe sell their packages here.

In India's embryonic personal computer market 'grey-market' PCs – locally assembled machines made up with illegally imported components – have been overhauled by branded imports from companies like Compaq Computer, Wipro-Acer and International Business Machines.

While brand name imports take a growing market share, local manufacturers – PCL, HCL InfoSolutions, Zenith – have been locked in a price cutting battle. Prices for mid-range Pentium-based machines have tumbled to around Rs30,000 (£476) and forced a number of companies, including PCL, into extensive restructuring.

However some manufacturers, including HCL InfoSolutions remain undaunted. The group has reacted to lower PC prices and squeezed margins by expanding its PC operations and gearing up for what it hopes will be an PC sales boom.

"We expect to be selling over 100,000 PCs a year and believe we can win 10 per cent of the market," says Arun Dang of HCL.

Those are ambitious but not outrageous targets. International Data Corporation's Delhi-office estimates that around 473,000 PCs were sold in 1996/97 and that the figure will rise to about 636,000 in the current year (excluding about 20,000 PC server sales). They say the figures will reach 1.1m units in 1999/2000 based upon a realistic compound annual growth rate of 32.6 per cent.

If IDC's optimistic projections were realised, PC sales would grow by 40.8 per cent to 1.32m over the next three years. Even IDC's pessimistic forecast, based upon compound annual growth of 25.3 per cent, would see sales this year of just under 600,000 rising to 931,000 in 1999/2000.

Sales of domestically produced CD-Rom titles and multimedia training programmes are growing. Computer training schools have mushroomed. And today more bright young Indians would rather become software entrepreneurs than doctors or lawyers.

Under pressure from the IT sector, Internet access is being liberalised – Internet connections grew by 30 per cent last year to 45,000 – and other telecoms services are likely to follow. For India's emerging technology companies, the web provides an ideal shop window for their services – and a level playing field on which to compete with rivals in the West.

In the public sector, a few state governments and central government departments are beginning to adopt technology in an effort to improve efficiency and the delivery of services.

In industry, sales of high-end business software from companies like Germany's SAP are growing strongly as India's commercial and industrial business houses face up to the need to invest in IT to ensure that they can compete in both the liberalised domestic market and overseas.

"Potentially this is a huge market," says Ajay Mulpani, a industry analyst with Caspian Research in Bombay. Indeed this improving domestic outlook is reflected in the financial markets. Shares of India's leading technology companies, particularly those with strong technology bases, product strategies or service offerings have soared over the past year.

For example, shares in Infosys, the Bangalore-based technology group, have risen 25 fold over the past year. This reflects the determination of the company to become "a world class software house in the global market" and to compete "on quality and productivity and not just cost".

Although the domestic Indian software market has traditionally lived in the shadow of the dynamic export sector, it has nevertheless recorded strong growth in recent years. The domestic market has expanded by almost 49 per cent over the past five years, growing from Rs3.2bn in 1991/92 to Rs24.1bn in 1996/97.

Last year's figure includes both the sale of imported software packages as well as domestically developed software packages and services, but it excludes the large volume of in-house software development.

"For many years the domestic software industry in India had been growing slowly and lagged behind the growth of the export industry," notes National Association of Software and Services Companies. "However this situation is fast changing. In the past couple of years, the domestic software industry has started to show maturity and achieve high growth rates of 40-50 per cent.

"The industry players have realised that software export is very much dependent on the size of the internal market that exists for developing software."

According to Nasscom estimates, the domestic software industry will record sales of Rs36bn this year and grow to Rs125bn by the end of the decade as the pace of domestic IT adoption accelerates. But there are a number of other reasons behind the recent surge in domestic software sales. These include the elimination of import duties on imported software.

Coupled with growing home PC sales and a marked shift towards packaged software, these factors have produced a surge of interest in the domestic market and a boom in IT training for companies like NIIT and Aptech.

The growth and potential of the domestic IT market has also caught the attention of multinationals. Microsoft's Indian sales and operations are expanding rapidly. Other multinationals targeting the growing Indian domestic market include Novell, Oracle and Computer Associates.

Overall Nasscom reckons there are 430 companies operating in the domestic Indian software market. Prominent local companies include Tata Consultancy Services, Wipro, the government owned CMC group, Onward Novell, Sonata, Tata Unisys, Rolta and Mastek.

Although services and turnkey projects still account for a large propor-

Continued on facing page

THE MULTINATIONALS • By Paul Taylor

Oracle goes into Combat and wins another battle

At the Indian Development Centre in Bangalore, Oracle built an operating system with the help of some of India's best and brightest engineers

When Larry Ellison, Oracle's flamboyant chairman, unveiled his vision for the network computer – a thin client device designed to cut the cost of corporate computing – it was left to Jerry Baker, Oracles's chief operating officer, to turn the vision into reality.

One of the challenges facing Mr Baker as chief executive of Oracle's NCI subsidiary was to develop an operating system for an NC based on an Intel microprocessor.

"This was one of Oracle's highest visibility projects," notes Ranjan Chak, executive director of Oracle Software's Indian Development Centre (IDC) in Bangalore.

Mr Chak explains: "It all started when Jerry Baker called me on July 1 last year and set up a challenge for IDC to develop and operating system prototype within 12 weeks.

"I called in the IDC management group and within a couple of hours we had carved out a separate team by stealing members from all the existing project teams."

Oracle's IDC unit was set up three years ago and has grown to include 150 software developers. They are working on highly sophisticated projects ranging from automatic porting tools and a support assistant to speed up customer response times to Oracle Installation Studio, a development tool used to create standard installation packages for Oracle projects.

The highly confidential NC project was code-named Combat. Spurred on by the knowledge that a rival Oracle team based in the US was also working on the project, the IDC team worked long hours.

"We even had a room booked in a hotel nearby in case someone needed to steal a few winks," says Bikramjit Gupta Sharma, project manager on the NC project. "We knew that this project was crucial, and we had to deliver."

The Combat team began work on July 8 last year and finished three months later on October 8, just in time to allow Ellison to demonstrate the Intel-based NC in Tokyo that month.

"Today we have full responsibility for the operating system and kernel for the Intel NC," says Mr Sharma.

Their efforts won high praise from Mr Baker. "IDC has been successful in every venture and over achieved in every way," he says. "That is the reason I enlisted IDC's support in developing our first corporate NC.... I knew I could count on IDC delivering against all the odds."

Oracle is just one of the big US IT groups that have tapped the Indian market as a source of highly skilled and strongly motivated software engineers. These engineers are available at a fraction of the cost of their US counterparts.

Other US multinationals that have established captive software development units – working on international projects and having worldwide responsibility for particular products – include Texas Instruments, one of the first US companies to set up a dedicated facility in Bangalore, Novell and Motorola.

TI, which moved into a stunning new building in Bangalore two years ago, now has 330 people in the facility. Srini Rajam, managing director, expects this figure to grow by between 100 and 150 over the next two years.

The Indian centre has four project teams focused on designing digital signal processors (DSPs), analog devices, application software and application specific integrated circuits (Asics).

The Indian facility has been at the forefront of TI's efforts to exploit its leadership in the fast growing market for DSPs. These are used in many electronic devices ranging from mobile phones to modems.

Mr Rajam says with pride that the parent company has "tremendous confidence in us. People think we can do anything".

Novell's huge software development facility on the outskirts of Bangalore has a similar reputation. The software development centre employs 200 engineers who are working on key components of Novell's ManageWise and GroupWise products including gateway and storage management systems.

"The quality of our people is excellent," says Vikram Shah, managing director. Indeed, despite Bangalore's overstretched infrastructure and notorious power problems, US, European and even a few Asian multinationals are continuing to arrive. Among the recent new entrants are Siemens, which has established a large software development operation and Lucent, the US telecommunications group which is building a new facility next door to TI.

But other foreign multinationals are choosing different Indian cities and different methods to tap the Indian market. For example Cisco, the networking equipment leader, announced in August that it was setting up a software development facility in Madras in partnership with HCL, the Indian IT group.

Most recently Microsoft confirmed plans to set up a software development centre in India ending months of speculation since Bill Gates, Microsoft's chairman, visited India earlier this year.

Speaking in Delhi last month, Orlando Ayala, Microsoft's vice-president for international operations, said the US software giant would make a detailed announcement soon. "It is not a question of if, it is a question of when," he says, describing Indian software skills as "unparalleled".

However, Microsoft has yet to provide details as to the size of the Indian investment, the centre's likely location or the products in which it might specialise.

Microsoft will be one of the last US IT multinationals to take the plunge and set up offshore operations in India – although US companies are still well ahead of their European and Asian counterparts.

Bangalore itself is often decribed as India's Silicon Plateau. Indeed, once inside one of the air-conditioned offices leased by Western high technology groups in downtown Bangalore or elsewhere in India, it is easy to forget that this is India, and not California.

The companies use high-powered Sun Microsystems and Silicon Graphics workstations. Video-conferencing and high-speed satellite telecommunications links have transformed these buildings into virtual offices which could just as easily be in San Mateo, California, Tokyo or London.

Multinational corporations in India

Rank	Company	Revenue Rs m	Tie-ups	Rank	Company	Revenue Rs m	Tie-ups
1	HP	6,110	HCL HP, HP, HPISO	26	Cisco	390	Cisco
2	IBM	5,770	TISL, Lotus	27	TI	360	TI India
3	Intel	3,600	Intel	28	Tektronix	331	Tektronix India
4	Compaq	3,599	Compaq	29	Bay	330	Bay
5	Digital	3,214	DEIL	30	HNS	312	HSS,HECL
6	Acer	2,652	Wipro-Acer	31	Cabletron	240	Cabletron
7	Sun	2,160	Sun	32	SAP	229	SAP
8	Microsoft	2,000	Microsoft	33	SDRC	222	SDRC
9	Redington	1,711	Redington	34	LG	220	LG
10	Seagate	1,600	ACI	35	Datacraft	213	Datacraft RPG
11	Siemens	1,548	SISL, SNI, SCS	36	PTC	208	PTC
12	Apple	972	Apple	37	Autodesk	200	Autodesk
13	Citizen	890	TVSE	38	Bull	200	PSI
14	Liebert	805	Tata Liebert	39	Panasonic	170	Godrej
15	Novell	800	Onward Novell	40	UB	170	UB
16	SGI	715	SGI	41	D-Link	169	D-Link
17	AST	703	AST	42	Baan	157	Baan
18	Dell	700	Dell	43	Tandem	145	Tandem
19	Oracle	700	Oracle	44	Chuntex	141	Gebbs
20	Motorola	685	Motorola ISG, MIEL	45	Cadence	118	Cadence
21	APC	650	APC	46	CA	113	CA
22	BT	628	MBT	47	Multi-Tech	106	Multi-Tech
23	Epsom	576	Epson	48	Informix	100	Informix
24	3Com	520	3Com	49	Tandberg	90	Tandberg
25	Intergaph	450	Rolta	50	Boca	87	PowerTel Boca

Source: Dataquest magazine

IBM's Software Development Centre, Bangalore. The area is also known as Silicon Plateau, due to its many software developers

DOMESTIC MARKET

A growing range of business packages

From facing page:

tion of the overall domestic IT market, packed software is claiming a growing share. Sales of packages grew by about 40 per cent last year, led by Cad/Cam and relational database management systems (RDBMS), and financial software packages.

Among the fastest growing market segments are the manufacturing, financial services and government fields. Sales of enterprise resource planning (ERP) packages grew by 46 per cent, Cad/Cam packages grew by 48 per cent, RDBMS increased by 23 per cent, and sales of financial accounting packages grew by 25 per cent.

Overall, Nasscom reckons overseas companies launched 156 new software packages last year – producing a bonanza for big re-sellers such as Bangalore-based Wipro. However, domestic packaged software vendors have also performed well. According to Nasscom, 127 new products from indigenous software suppliers were launched last year.

The leading domestic packaged software developers include Infosys, whose rapidly expanding product portfolio includes the Bancs 2000 banking package. But Naryayan Murthy, Infosys chairman and managing director, admits: "We have not been able to sell as many copies as we expected because the automation of the banks hasn't been taking place as quickly as expected."

Undaunted, Infosys has now developed Websetu, an electronic commerce tool.

Another successful indigenous software package developer is Bombay-based Mastek *(see report, page 6)*. Its products include the Mamis enterprise resource planning package, together with life insurance and securities industry offerings. NIIT, part of the HCL group, CITL and TCS in Bombay, Bangalore-based Synetics and Madras-based Ramco, whose ERP package has won critical acclaim and competes head-to-head with SAP.

These companies have begun to prove that domestic Indian software developers can build innovative, leading-edge business software packages capable of competing in the global software markets. Their success is likely to encourage other Indian software entrepreneurs to follow.

Naryayan Murthy, chairman of Infosys: 'Bank automation has not taken place as quickly as many expected'

INDUSTRY VIEWPOINT • By Dewang Mehta

An emerging software superpower

A leading figure of India's software industry explains its growth and examines its prospects

The next time you buy a pair of Levis or Reeboks take a moment to ponder the process that brought these products to you. While it takes just eight minutes to stitch a pair of Levi 501s, there are hundreds of stages involved in converting the raw denim from the mills to the final product in the shops. These stages can be a process manager's nightmare.

Information technology provides the solution. The millions of people who wear the latest pair of jeans or trainers may not realise that software houses in India are to thank for the efficiency with which their favourite brands reach them.

Just as the gulf region has its crude oil and South Africa its gold and diamonds, India's natural resource is its abundance of technically skilled manpower. This natural resource easily transforms India into a software paradise. It is hardly surprising that when people discuss worldwide software development today, they talk of India – more precisely the Indian software industry.

What is behind India's success in providing efficient software solutions? Some say it is the natural Indian proclivity for mathematics. Others quote the fact that it was, after all, India who invented the numeral zero. Still others point to the country's cost and quality advantage. The truth encompasses all of these reasons, as well as many more.

India offers cost-effectiveness, quality, reliability, speedy deliveries and, above all, use of state-of-the-art technologies in software development. Last year, 131 of Fortune 500 companies outsourced their software requirements to India.

Evidence

A compounded annual growth of about 55 per cent in the last five years speaks volumes about the performance of the Indian software industry. During the 1997-98 fiscal year, India's software industry is expected to earn revenues of Rs10bn ($2.8bn). Of this, exports may be as high as Rs64bn.

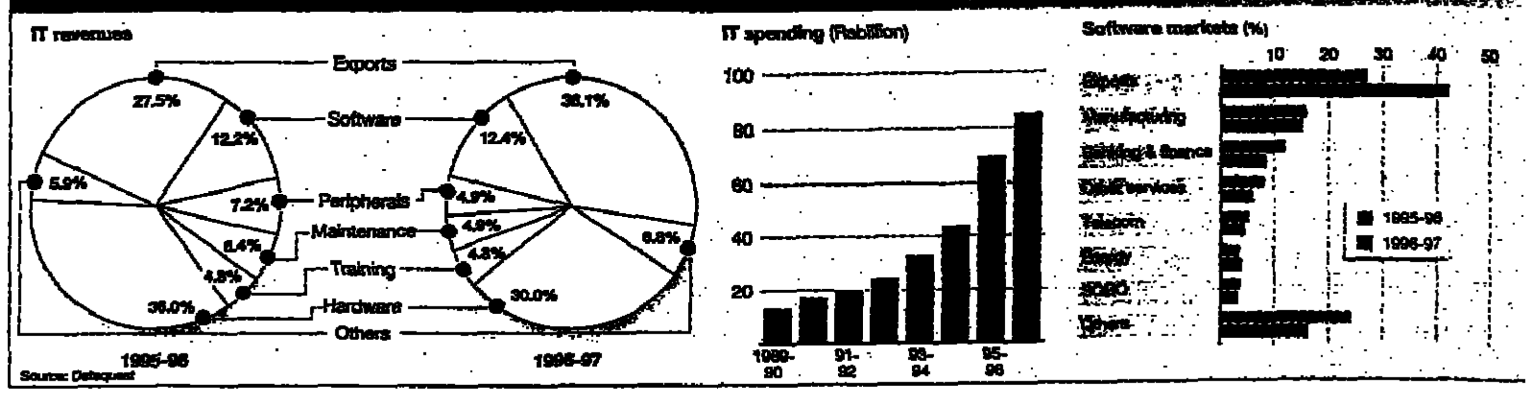
According to a World Bank survey, India was rated as the top outsourcing destination by vendors in the US.

The survey also indicated that India commands a 16.7 per cent market share in the global customised software development market. (However, India's market share in the global products and packages market is quite dismal).

International observers agree that India is reaching the top of the league in software development. When Microsoft's Bill Gates visited India in March, he observed that India will emerge as the software superpower of the 21st century. Many Indians share his sentiments.

The pace of growth of the software industry has, however, been so phenomenal that growth of the infrastructure and domestic demand in India have not been able to keep up. Moreover, the rate of penetration of the personal computer in India has been poor. Although software exports have been increasing steadily, the growth of computerisation within the country – in government, industry and banking – has been slow. The important questions now are when and how India will emerge on top of the software league.

Expanding markets

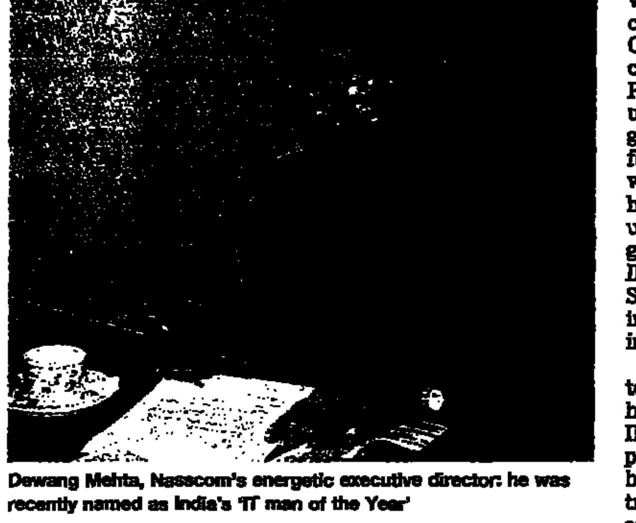


Source: Dataquest

Although the Indian software industry has been growing by 50 per cent annually, industry experts in India are not satisfied. They would like to see growth rates of at least 100 percent. There are indications that such growth can be achieved quite soon.

Over the past few years, Bangalore has gained an international reputation as the Silicon Valley of India. But is one Silicon Valley city enough for India? Events over the past few months indicate that in the next 10 years, India is bound to have at least 25 more 'info-cities' with the latest infrastructure and connectivity.

N. Chandrababu Naidu, the 'IT savvy' chief minister of Andhra Pradesh, has taken the lead and established the city of Hyderabad as a major software centre.Locally, Hyderabad is fast being referred to as 'Cyberabad'.



Dewang Mehta, Nasscom's energetic executive director: he was recently named as India's 'IT man of the Year'

Not to be left behind, other chief ministers are trying to promote info-cities in their states. Karnataka, Goa, Orissa, Maharashtra, Gujarat, Tamil Nadu, West Bengal, Kerala, Rajasthan and Himachal Pradesh are drafting state IT policies. They are in a race to set up as many software development cities as possible.

These developments have led almost all the major software houses to set up development centers in India.

Research

In the next 10 years, India will emerge as a global R&D centre for software. Already, ComputerVision does 50 percent of its global R&D at Pune in India. Novell has set up their R&D Centre at Bangalore. The operating system for Oracle's NC was also written in Bangalore. Baan has announced that it would undertake 80 percent of its global R&D at Hyderabad. IBM, Microsoft, Oracle and Silicon Graphics are heavily investing into R&D schools in India.

For any software industry to be strong and vibrant, it has to have its own share of IPR ownership. It is the power of IPR that makes or breaks the software industry. Increased R&D activities are bound to establish India as a technology leader. This will set in motion India's entry into the top league of software developers.

Growth of the top 20 suppliers

Rank 1995-96	Rank 1996-97	Company	Turnover (Rs bn) 1995-96	Turnover (Rs bn) 1996-97	Growth %
1	1	Wipro Infotech	7.8	8.7	11.85
3	2	TCS	5.1	7.2	40.15
–	3	JTS Technology	0.9	6.2	588.42
4	4	PCL	4.8	5.9	23.69
5	5	TISL	3.4	5.5	62.97
9	6	NIIT	2.6	4.5	70.36
6	7	HP India	2.8	3.5	28.60
8	8	Digital India	2.6	3.2	23.71
10	9	Aptech	1.9	2.3	24.57
11	10	CMC	1.8	2.3	26.72
12	11	Tata Infotech	1.7	2.1	21.11
14	12	Godrej	1.5	2.1	41.45
15	13	Unicorp	1.4	2.1	49.10
–	14	Microsoft India	1.1	2.0	78.57
19	15	CMS Computers	1.3	1.9	46.11
–	16	Pentafour	1.1	1.7	50.61
–	17	Redington	0.9	1.7	89.57
–	18	MicroLand	1.2	1.6	30.23
18	19	ATD	1.3	1.5	15.17
–	20	Tancom	1.1	1.5	43.49
		TOTAL	54.8	67.8	23.35

Source: Dataquest Magazine

Recently, the so-called information superhighway has caught the imagination of the Indian people. There are only about 45,000 Internet connections in India at present, but this figure is expected to grow. The government recently announced an Internet Service Provider (ISP) policy, which will help to escalate the pace of providing Internet connectivity in India. In other words, India may only have an information superfootpath, but it is fast becoming an information superhighway.

Within the ISP policy, the government has sanctioned a budget of Rs12bn to establish a high-speed national telecom backbone.

In hardware technology, it is said that set-top boxes are likely to replace today's personal computers and televisions. Today, more than a third of US households have personal computers. In India, only one out of every 700 homes has a computer. The Indian government is applying strong measures to

Continued on facing page

INTERNET POLICY • By Amy Louise Kazmin

Long way to go on a bumpy road

In spite of India's computer talent, the country has a mere 50,000 Internet subscribers. There is, however, plenty of pent-up demand

India may be a supplier of computer programming brainpower for the global information technology industry, but as a stretch of the super highway, it's little more than a bumpy, single-lane road.

While foreign companies like AT&T, Global One, Compuserve and IBM have watched in frustration, access to the Internet has remained a tightly controlled government monopoly. India's international telephone company, VSNL, is selling 500-hour, annual Internet subscriptions for a whopping $420 – nearly twice the monthly salary of an entry-level computer engineer. The government's hefty up-front charge, a lack of promotional efforts and a reputation for unreliable service has left India behind in the Internet race. For all its computer talent, the country currently has a mere 50,000 Internet subscribers, though there's plenty of pent-up demand.

Yet India's information technology industry is now poised for a fillip.

In September, India's Cabinet agreed to let private Internet service providers set up shop for the first time. In doing so, officials conceded that it will take the marketing muscle and customer service of private companies to popularise the Internet, and bring its benefits to a wider Indian audience.

When it comes to the numbers, officials are aiming high: they say they would like to see India boast 1.5m to 2m subscribers by the year 2000. Computer professionals now talk hopefully of the potential for a fast-moving Internet boom comparable to the cable television revolution that swept India several years ago.

"It's going to be part of everybody's life," says Anjeli Sinha, director of Status Infonet Limited, a New Delhi-based networking company that designs and maintains corporate websites.

"We can see a tremendous business potential."

It is, however, too soon to celebrate. Although potential Internet service providers are cautiously optimistic, technical details are still being thrashed out. Officials have not yet decided whether all existing telecommunication infrastructure – including India's new and upcoming privately owned cellular telephone and basic telephone networks – will be allowed to carry data traffic. If not, private service providers will have to depend on the government – their competitor – to make lines available, a not entirely comfortable proposition. VSNL will also retain its monopoly over international access to the net. Potential Internet service providers are lobbying to be allowed to select their own foreign half channel – that is to link directly to the international backbone of their choice after going through the VSNL gateway – but the proposal has met with resistance from VSNL. The matter has now been referred to India's Cabinet secretary for further consideration.

The outcome of the half channel battle is likely to determine just how much telecom and information technology heavy-weights are willing to invest in India's Internet business.

At present, VSNL routes most of its international traffic in bulk through MCI. But companies like Global One or AT&T will not be too eager to market Internet service in India if it means generating more traffic for their rival. If they set up Internet services, they say they must be allowed to link up directly to their own systems after going through VSNL's international gateway.

"If that doesn't come through, you have a real challenge asking multinationals to set up a branded service," says Virat Bhatia, of AT&T. Foreign equity caps are another constraint. With a 49 per cent foreign equity limit on Internet service providers, global telecom companies say their investment will be limited to what local partners can bear. "

This is a clever way that the government is using to stifle competition against itself," says the India country manager for one leading telecom company.

The domestic telecom backbone is another concern. India has decided that private investors will initially be barred from building or operating their own high-speed national data-transmission infrastructure. Instead, the government intends to spend $333m over five years to build a 2.5 gigabit fiber-optic network that everyone in the industry can use.

While the goal is laudable, analysts fear that New Delhi – notorious for lengthy delays in implementing projects – will not build fast enough to keep pace with exploding Internet demand.

"Speed is of the essence," says Dewang Mehta, director of the National Association of Software and Service Companies.

"If the backbone comes after five years, that's too late in the day." It is not just speed that counts. Competing networks would also reduce consumer costs, attract cutting edge technology and help develop the infrastructure.

But the government, which has a monopoly in domestic long distance as well as international phone service, fears that privately owned data links would be widely used for voice traffic, eroding their revenues.

Despite the gaps, industry analysts say there is much to be pleased about.

"It's a major milestone," says Suresh Aswani, general manager for network services of IBM Global Services India. "There are lots of positives here."

Among them: the government has decided that Internet service providers will be allowed to directly interconnect among themselves; and VSATs will be allowed to carry data transmissions. Once application procedures are formulated, analysts expect Internet service to sprout in cities that currently have no access to VSNL's network. And faced with imminent competition, VSNL's own service is also steadily improving. Six months ago, Internet users in the Indian capital griped that it was nearly impossible to get online during busy working hours. But the addition of more lines, consolidated on just a few telephone numbers, has made access far easier, even during prime working hours.

Several Indian IT groups have a web presence. Wipro Infotech (*www.wipro.com/f-infotech.html*), NIIT (*www.niit.com*), and of course Videsh Sanchar Nigam Limited, India's international telecoms service provider.

One of the best sites for an overview of the Indian software industry is *www.software-india.com*, which also features a useful company directory. IDC's India site, *www.idcindia.com*, is also worth a visit for a view of the domestic industry.

For general information try B G Mahesh's web site, (*www.mahesh.com*). Dataquest, India's IT magazine, is on *www.dqindia.com*.

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SOLVING THE 'YEAR 2000' COMPUTER PROBLEM • By Paul Taylor

Timely opportunity for India Inc

Software companies are busy helping to solve the year 2000 computer date problem as well as programming for European economic and monetary union

The 'millennium bomb' or year 2000 computer date problem could prove to be the "icing on the cake of success" for India's offshore software companies.

The 'Y2K' issue – as it is often called – threatens to disrupt information technology systems and other electronic equipment throughout the world because many older computer programmes, databases and embedded micro-controllers use just two digits to denote the year. They will, therefore, be unable to deal with the date change on January 1 2000 unless huge sums are spent to correct the problem.

Researchers at the Gartner Group have estimated it could cost as much as $600bn to tackle the millennium problem, but time, or rather the lack of it, could pose an even greater challenge.

In addition, the people needed to quantify, plan, execute and test software changes in private and public sector enterprises throughout the developed world are in short supply.

"The millennium bug means tremendous opportunities for Indian software companies," says Dewang Mehta, executive director of the National Association of Software and Services Companies. "Many Indian companies have already taken up this challenge and see it as a significant opportunity – it's 'extra' cash," says Mr Mehta.

He estimates that at least $2bn of Y2K work could come to India – still a relatively small amount, given the scale of the worldwide problem – and a further $1bn of Emu-related software work could follow.

Last year, the national association formed a special interest group on Year 2000 issues. The Directory of Year 2000 Solution Providers from India lists 135 companies which either have tools or are providing solutions to the problem.

Indeed, over the past few years most of India's leading offshore software development companies have set up dedicated Year 2000 units or complete "software factories". Some, like HCL Consulting, have signed partnership deals with US and European tool vendors, computer services organisations and consultancies.

HCL Group's joint venture with James Martin, the US-based service provider, combines what Gartner has described as "the leading redevelopment and Year 2000 solutions methodology" with HCL's "software factories" which are aimed at reducing project time and cutting project costs.

"The cost-savings for these (Y2K) projects, if conducted offshore, will range from 30-60 per cent less than competitive offerings that do not include offshore services," said Gartner analysts.

Such claims are backed up by the experience of companies like Bombay-based Datamatics which operates one of the country's largest Y2K software conversion factories and has evolved its own integrated conversion programme dubbed Datamatics Solution 2000.

"An offshore software facility has the potential to reduce your IT costs by 40 to 50 per cent while meeting software project schedules," says the company. "Both advantages are crucial to the Year 2000 problem with its characteristic large volumes and finite worldwide deadline."

Many Indian software companies, including Datamatics, are using Y2K toolsets developed by US market leaders like Viasoft and Peritus and Micro Focus, the UK-based group. Others, including Delhi-based IIS Infotech, have developed their own proprietary methodology and tools to provide a comprehensive solution to the problem.

IIS uses its own Year 2000 tool called IIS 2000 but also has a partnership with Viasoft, one of the leading US-based tool vendors. "Our order book has improved dramatically this year," says Saurabh Srivastava, IIS managing director. "Y2K has had a role to play in this."

Finance companies, utilities and transport companies have been among the first to address Y2K issues, he adds.

As with other Indian software companies, IIS, based in Noida, near New Delhi, sees the Year 2000 problems as an opportunity to grow the business and forge new customer contacts.

In Bangalore other leading software developers including Infosys, BFL, Wipro Systems and TISL, the Tata-IBM joint venture, are also exploiting the Y2K opportunity. For example BFL, which uses Micro Focus tools, is undertaking a large project for Federal Express, the international courier, while TISL is tackling projects for IBM customers in Australia, the US, Europe and the Middle East.

Mr B V Venkatesh, BFL's president and chief executive, says the group's dedicated Year 2000 team has already converted more than 20m lines of code for overseas clients in the finance, transport and other sectors.

Nevertheless, most companies report that business has been slower than expected. "I don't think Year 2000 work has met with our expectations," says Mr V Chandrasekaran, chief executive of Wipro Systems which has undertaken about $6m of Y2K contract work.

"Customers still seem to think there will be some kind of magic wand – I know big companies that haven't even started work."

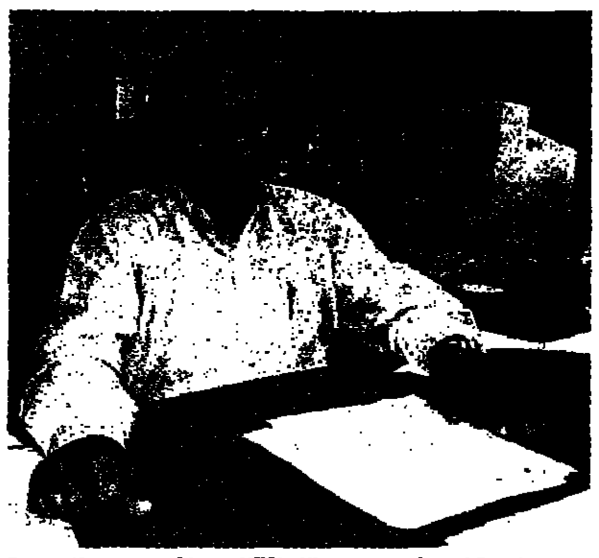
However, along with other senior software industry leaders, Mr Chandrasekaran believes there could be a late rush to secure Year 2000 resources. "It could happen next year," he says.

But even if there is a late rush of work India's software companies are likely to adopt a careful approach, ensuring they do not become too reliant on work which could quickly dry up after the millennium. "Most Indian companies are being intelligent and are limiting their Y2K work to about 10 per cent of turnover," notes Mr Mehta.

But some companies, particularly those with large overseas parents, are being more adventurous. For example, most of TISL's work is for IBM's customers overseas, but even so Pawan Kumar, the group's managing director, says it is limiting the level of its Y2K work to involve not more than 20 per cent of its workforce. "If we want to do more work than that, we will subcontract it out to business partners," says Mr Kumar.

He says TISL has had talks with five or six potential partners who could be called upon to do overflow Y2K work. Other companies including TCS have already begun to subcontract Y2K conversion work, in TCS's case to Delhi-based Svam Software.

India's offshore software development industry is maturing and increasingly looking at companies in neighbouring countries as potential partners. "India Inc or India Plc is beginning to emerge," says Mr Mehta.



Pawan Kumar, president of TISL. His company is tackling the millennium bomb issue for IBM customers around the world

INDUSTRY VIEWPOINT

Plans for expansion

From facing page:

change the situation. It hopes to increase the ratio to at least one PC for every 30 people by the year 2007.

India today has the second largest English-speaking scientific manpower pool in the world – next only to US. In contrast, half of the world's illiterate population lives in India, thus it is important to spread literacy and empower the citizens of India.

With the thrust in policy initiatives toward technology, I hope to see in the next five years at least every school and college in every village, town and city of India connected to the Internet.

It is often said that eventually almost every home in the world will have a PC-cum-TV connected to the information superhighway. In India – unlike many other countries – cable TV or the direct-to-home (DTH) phenomenon is likely to herald the revolution that will bring the so-called information superhighway to the home and not necessarily via the personal computer that we know today.

In today's world of limited connectivity, choices at each point in the 'value chain' are, by definition, finite. But in contrast, broadband connectivity of the future means infinite choices.

But infinite choice can also bring infinite bewilderment. This navigation problem can be solved in all sorts of ways, and each solution is a potential business: the navigator could be a database, a search engine, intelligent agent software orjust somebody giving advice. The navigator could also be a brand, providing recommendations or endorsements. The new world will be the world of information superhighways and navigators.

If India cannot develop the infrastructure for the information superhighway for the world, it can easily play the role of a navigator through its immense software powers. After all, all the navigation will be software-driven. That is the real hope for Indian software industry and India in the future of information technology.

From the above scenario, it is evident that in the year 2007, India's IT industry can easily achieve a revenue of $100bn. That year India will celebrate 60 years of independence – and it could be the year it emerges as a software superpower, a view that was echoed by Bill Gates when he visited India earlier this year.

Software industry concentration

Location	No of units approved	No of units operating	No of units exported
Bangalore	170	132	81
Chennai	60	41	29
Bhubaneswar	11	8	2
Calcutta	24	20	10
Gandhinagar	42	12	11
Hyderabad	89	63	44
Jaipur	5	4	2
Noida (Delhi)	161	109	71
Pune	71	50	34
T'Puram	34	22	14
Total Units	667	461	298

Source: Software Technology Parks

Chandrababu Naidu, AP's chief minister, is turning Hyderabad into 'Cyberabad'

Indian computer industry: market leaders

Software Company	Revenue Rs m	Peripherals Company	Revenue Rs m	Hardware Company	Revenue Rs m
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SISL	921	Seagate	1,600	Compaq	3,600
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oracle	700	Citizen	900	Acer	2,651
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TI	380	APC	650	Sun	2,160
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Lotus	240	Tektronix	330	SGI	714
[illegible]	[illegible]	LG	[illegible]	[illegible]	[illegible]
SDRC	221	Canon	50	Dell	700

Source: Dataquest magazine

Key IT companies

IT multinationals Company	Revenue Rs m	Growth %	PC suppliers Company	Numbers	Value Rs m
[illegible]	208	212.78	Compaq	33,452	3,599
3Com	520	108.00	Acer	33,036	2,652
Siemens	1,546	100.69	IBM	24,371	2,116
Redington	1,710	89.57	AST	12,600	703
BT	828	84.48	HP	11,935	1,099
Liebert	805	81.18	Digital	10,369	1,077
Compaq	3,599	79.97	Dell	7,770	700
CA	113	79.37	Apple	6,506	972
Microsoft	2,000	78.57	SNI	2,800	152
SDRC	221	74.41	Toshiba	1,145	110

Source: Dataquest magazine

TATA CONSULTANCY SERVICES • By Krishna Guha **in Mumbai (Bombay)**

Strategic alliances with global partners

TCS, India's biggest software company, with revenues of Rs7.2bn, has learned to be nimble in developing new products

Size sets Tata Consultancy Services apart from the rest of the Indian software industry – and gives it a distinct set of priorities, including the health of India's domestic market.

"Exports can continue to grow rapidly – India still accounts for less than one per cent of the total global software industry," says Faqir Kohli, deputy chairman of TCS, which achieved revenues of Rs7.2bn last year. "But in the long run you export those goods for which you also have a good domestic market within the country."

Mr Kohli says that Indian software companies are held back by the "low level of computerisation" at home. Last year India added 500,000 personal computers – out of a global increase of 73m – but the number of PCs per capita is tiny by international standards.

Whole swathes of India's economy – and most of its government sector – are not computerised at all. Mr Kohli says Indian software companies must "help grow" their home market – working with hardware manufacturers, universities and the government. The potential for TCS –India's biggest software company with the strongest brand name – is obvious. But TCS also needs a healthy local market.

"About 40 per cent of our people are working on domestic business," Mr Kohli says. "I need these jobs to train my people." The challenges of being a big global software company direct corporate strategy within TCS.

"We have the critical mass to look at things in a much broader perspective than we used to," says S Ramadorai, managing director. Unlike most of India's small software companies, TCS has a powerful international brand, and is recognised for its experience and technology. But size, as the old adage says, isn't everything.

"Size can be an advantage or a disadvantage, because of the internal delays that may creep in," says Mr Ramadorai. He says TCS has to learn to be "very nimble" in spite of its scale – developing new products and pitching for new business.

"A big part of this game is how fast you can run," he adds. Training – or "technological absorption" – is also a big priority. "The speed at which technology changes is accelerating," said Mr Ramadorai. "It used to be a 24-month cycle now about 12 months and only time will tell how fast technology is going to change in the future."

Unlike a small start-up company TCS cannot just throw together the latest skills and technologies hot from the university classroom. It has to continuously retrain a staff of thousands.

"You have to be proactive and have the ability to absorb technology at the rapid pace at which it hits you," says Mr Ramadorai. "This is probably the biggest external challenge."

Furthermore, Mr Ramadorai says that a big company has to ensure that experience gained in one project is actually diffused within the organisation, and employed in future assignments.

"Re-use and re-use has to be a way of life," he said. "We cannot afford to reinvent the wheel." TCS is aware that the advantages of incumbency – and a glittering track record – can quickly be eroded in today's fast-evolving technology industries. Advances in communications with the Internet, intranet and wide-area network (Wan) applications is the most obvious example.

"Solutions can come from any company, big or small, anywhere in the world," says Mr Ramadorai. "It is an open arena and we have to be prepared for that."

In addition, clients are much more likely to shop around – given the big increase in the number of alternative providers. "If you have done a successful engagement it does not mean that you will automatically win the next contract," says Mr Ramadorai. "You have to work hard to win each one."

In this arena – where the client is king – business skills have come to the fore. And industry specialists say that sales and marketing is the nearest thing to a weak link in the TCS chain, when compared with global best practice. Mr Ramadorai says marketing skills "have to be improved".

> The company has set up a huge facility to process Year 2000 systems' migrations

"If you are just a technological organisation you can only go so far," he explains. "If you are a great marketing organisation with great technological depth that is the best combination."

The central plank of TCS's strategy is to decentralise the company into business units that operate "like a small business" – chasing after opportunities and churning out new ideas. Some of TCS's business units are clustered around technologies – for instance, an internet, intranet and WAN division – and others around client industries such as banking.

"We give responsibility to the head of the business unit to completely run it as an independent business" with about 500 or 600 employees, he says. The main board only sets "policy guidelines".

Operations, marketing, sales, supply – "everything is decentralised," he says.

This policy has "accelerated" in the last 18 months. Many of the new unit managers are sent to top business schools – such as Harvard – to develop entrepreneurial skills. TCS is now looking at cementing this new structure with performance-related pay.

"Rewards have to be completely re-looked at," says Mr Ramadorai. In future these will be based on the performance of an individual business unit. In some units, the scheme has already been put in place.

Meanwhile, TCS has developed *strategic alliances with several* global companies. These included Ernest and Young, the accountancy and consultancy group, and Microsoft. "Strategic alliances, alignments and opportunity specific relationships are becoming a way of life," says Mr Ramadorai. He adds that clients now demand a single team with world class skills in several different disciplines.

The TCS-Ernest and Young alliance targets banking and finance, utilities and energy, telecoms, healthcare, government, transport and manufacturing.

By contrast, the alliance with Microsoft enabled TCS to design India's new paper-less National Share Depositary based on NT and Sequal Server technologies.

The company has set up a huge facility to process Year 2000 systems' migrations – capable of handling up to 750m lines of code – business which could be worth about $400m, though TCS is only expecting $200m to $300m. But while TCS set up the factory and provided about 25 per cent of staff – the rest are outsourced from lower skill software companies. This will cushion the loss of revenues when the project is over, which Mr Ramadorai believes will be some time after 2000. "Many companies will only migrate mission critical systems by 2000," he says.

*TCS hopes the non-staff work*ers will become maintenance outfits, deepening the pool of servicing talent available. As for TCS itself, industry observers often point to the logic of a merger with other software companies in the Tata group – perhaps followed by flotation to create India's first quoted software giant. But this is not likely in the foreseeable future.

Ramadorai: 'Clients now demand a single team with world class skills in several different disciplines'

MASTEK • By Krishna Guha

Plans for higher-value business worldwide

Mastek aims to eventually provide strategic solutions for large clients

Desai: 'India's software suppliers must become much more business-focussed'

Ashank Desai, former head of India's software industry association Nasscom, believes that India will lose its cost advantages over its international competitors in as little as six years.

This belief underlies corporate strategy at Mastek, a fast-growing software company, where Mr Desai is chairman and managing director.

"Cost advantage will remain for six or seven years, but unless we begin to change now we will not be able to compete in six or seven years' time," says Mr Desai.

He argues that India's software companies need to build "sustainable advantages", which will remain when salaries have leveled out.

This means continuously moving into "higher value addition". It also means a shift in focus and targets from total revenue growth to revenues earned per person. Mastek, for instance, is trying to graduate from technical solutions to applications, through business solutions and on to providing "strategic solutions" to big corporate clients.

This involves a new way of thinking of computing – more akin to a management consultant than a computer programmer.

"Information technology today is not used for cost reduction. It is used to create strategic advantage," says Mr Desai.

He says software companies like Mastek have to become much more "business-focused" and develop know-how in different industries.

At present, Mr Desai admits, Indian companies are often called on "because we are very good in technology, but not because we can add value to a business or provide a solution of a business kind".

This long-run goal threatens to bring minnows like Mastek into competition with big IT consultancy companies such as Andersen Consulting.

But Mr Desai believes that companies such as Andersen will "themselves move up and up the value chain", leaving "a slot vacant which can be filled by companies from India".

The first string in this strategy was to restructure Mastek around four industry divisions – manufacturing, distribution, financial services and government – in June of this year.

"Last year we had the head of our Delhi office running the northern region of India," says Mr Desai. "This year he is head of government services all over India."

The biggest government software market in India is, of course, Delhi itself, home of the central government. But Mr Desai says the new structure "will allow the division head to replicate IT solutions in Maharastria, Kerala, or any of the other state".

Mastek has meanwhile set up a research and development centre in Pune – away from the regional head offices – "to make sure it is not driven by today's urgencies". The company has also restructured the way it serves clients abroad – which account for 85 per cent of last year's $21m revenues. The company has set up subsidiaries in the UK, US, Singapore and Malaysia. These deal directly with clients. The parent company provides the off-shore development facilities.

"The centre of gravity of the business is in the countries where we have clients," says Mr Desai. "These are not junior guys sitting there and selling." Mastek has opted to appoint local managers to head its foreign subsidiaries wherever possible. This helps the company to gain credibility and local market know-how.

"The UK market is different. The US market is different," says Mr Desai. "Each country has a different culture, a different way of doing business and building relationships."

He says local managers "bring with them these nuances" and "customer relationships and references", which are hard to build from scratch. This has worked in the UK. Mastek UK, headed by Mike Cast, accounts for 30 per cent of the group's revenues.

Customers include mail-order company Innovations and Mastek has also paired up with small IT consultancy companies such as BACG and Quidnunc. But the strategy has not yet born fruit in the US – where Mastek has struggled to find the right executives and business partners.

The company hopes it has turned the corner with the appointment of a new US managing director, Ken Beherendt. The next phase of Mastek's plan is to roll out higher value business solutions worldwide.

Mastek staff produce software for the manufacturing, distribution and financial sectors, as well as for government departments

Mr Desai is realistic. He knows that off-shore software development and other support services will continue to dominate turnover for some time to come. But he has set a target of 40 per cent of revenues from business solutions – and 10 per cent from "new projects".

At the start, Mastek is concentrating on IT consultancy-style projects in India's own increasingly sophisticated market – and in south-east Asia. It is not trying to take on Andersen's head-to-head in the US.

For the US and UK "we will continue to do outsourcing and offshore work", Mr Desai says. "For the next five years we can continue to grow based on existing advantages – speed, quality and cost."

But he adds: "In India and Malaysia we already have to compete not on the basis of cost."

Half of Mastek's revenues from its Malaysian subsidiary comes from business solution packages and systems integration, including prestige clients such as Bank of America.

"If we provide higher value solutions here," says Mr Desai, "we will learn the skills to provide them to the developed world."

OVERSEAS LISTINGS • By Paul Taylor

All eyes are on Nasdaq

Several leading software companies are seeking listings for their US subsidiaries as the export market continue its surge

India's leading software development companies are preparing to seek listings on the US-based Nasdaq exchange next year.

Between 10 and 15 Indian companies may seek Nasdaq listing for their US or other offshore subsidiaries next year, according to Dewag Mehta, executive director of India's National Association of Software and Services Companies.

Among those which are likely to seek early listing are HCL, the country's largest IT group, Wipro Infotec and Infosys Technology – three of India's blue chip IT companies. Other companies with UK-based subsidiaries or sister companies could seek listings on the London AIM.

Several other US-based companies founded by Indian entrepreneurs with extensive outsourcing operations in India, including IMR and Mastech, are already quoted on Nasdaq.

The move to seek overseas listings reflects the growing confidence of India's booming export-led software development industry.

"We need to leverage our technology and project management skills," says N. R. Murthy, chairman of Infosys. The company is expected to take a formal decision on seeking a Nasdaq listing shortly.

There are a number of factors driving the rush to Wall Street. These include: the growing need to be able to offer dollar-denominated stock options to help retain skilled staff; overseas acquisition plans; and the companies' desire to raise their international profile.

"There is a strong move towards globalisation within the industry," says Mr Mehta. More than 100 Indian companies have established US subsidiaries in the past three years, according to Mr Mehta. Many have a view towards a possible future listing.

Some, such as HCL, are preparing to set up subsidiaries in offshore centres

Continued on facing page

PROFILE: CHANDRABABU NAIDU • By Paul Taylor

Chief minister with a vision for IT

As head of the state of Andhra Pradesh, Chandrababu Naidu is, at 47, India's youngest chief minister. He believes IT is essential if India is to update its bureaucratic local government system and make it more responsive to the needs of the electors.

The son of a farmer in Naravaripally, Mr Naidu became active in politics while studying economics at Tirupati University. By the mid-1980s he had risen to become general secretary of the Telugu Desam party.

His high profile campaign to turn Andhra Pradesh into a model high technology state has already won him admirers – including Bill Gates, the Microsoft chairman who visited India earlier this year.

When Bill Gates was unable to visit Hyderabad during his Indian visit, Mr Naidu flew to New Delhi specially to meet him. At a US Embassy cocktail party, Mr Naidu cornered the Microsoft chairman, opened his portable computer, and spent half an hour demonstrating the executive information system which he had developed to help him keep track of state affairs.

Using the system, he can see data on virtually any facet of his state. He can, for example, see whether tax receipts are in line with budgets, check *primary* school education standards before a village visit or monitor water levels in Andhra reservoirs.

Mr Naidu acknowledges that what he is trying to achieve amounts to a revolution in current thinking. After all, EIS systems, web sites, notebook personal computers and electronic government are not the routine stuff of Indian politics. Also Andhra Pradesh is a poor and relatively backward state.

Among the challenges are lack of infrastructure and lack of international-class educational institutions in Hyderabad. "At the same time ordinary people are not aware of information technology, computers and all these things. So we have to educate them, carry them, motivate them and tell them this is for their benefit."

His four-pronged strategy for achieving such a transformation is straightforward. First, his priority is to develop the state's information technology infrastructure to encourage more software companies to set up operations in Hyderabad.

Secondly, he plans to introduce IT to government systematically by computerising all government agencies. Thirdly he wants encourage the use of IT in the private sector, and finally he is targeting human resources development.

Already he has won backing for the establishment of a new Indian Institute of Information Technology (IIIT) university in Hyderabad. This will house schools supported by multinational IT companies, including IBM, Oracle and Microsoft. Mr Naidu says other US companies including Motorola and Silicon Graphics are also showing interest. After meeting Mr Gates he is also hopeful that Microsoft will decide to site its software development center in Hyderabad.

"The biggest strength for us is our English speaking manpower," Mr Naidu says. In addition, he claims that 52 per cent of the estimated 1m software professionals of Indian origin who are working in the US are from Andhra Pradesh.

He views Singapore's 2000 and Malaysia multimedia super corridor as potential development models.

Mr Naidu has assembled an impressive team of domestic and international advisers. And he has persuaded the federal government to pay 10 per cent of hardware expenditure costs and 80-90 per cent of software costs, and to release spare telecommunications capacity for state use.

The chief minister is planning to build a fiber optic network to support data communications and video conferencing. He also plans to use this network to conduct government audits, track files and provide government services accessible via electronic kiosks sited in public places.

BANGALORE • By Rohit Jaggi

A good place to be an engineer

Bangalore has become India's centre of technology. A benign climate, and healthy wages in a thriving sector have created a bustling city

As befits the city in which India's first electric bulb was lit, Bangalore is a switched-on place for the technology-friendly.

Much has changed since 1905, but the city's agreeable climate and compact size make the long hours put in by most software engineers more bearable.

"Bangalore gives you time," says Pradeep Kar, chairman of Microland, (see *report, right*), which he set up in the city in 1989. "People live five to 20 minutes from work so you can play golf or tennis in the morning and still be at your terminal by eight o'clock."

The night before the morning after, though, is quite likely to be busy. According to management consultant Sunil Chainani, the city has "lots of happening places such as pubs and restaurants. Many software professionals work very long hours, but after they finish they are very visible around town."

Bangalore, which the computer industry shares with aircraft, electronics and machine tool companies, is proud of its many qualities. Its elevation of 1,000 metres above sea level takes the sting out of the south Indian climate, and it is one of the country's most progressive and liberal cities. Bars and restaurants are plentiful. Discos cater for the more energetic young professionals, and the atmosphere is friendly.

Days can be long even apart from work. Dinner parties tend not to start until quite late – and lateness for a late-ish start is fashionable – and more often than not food will be served right at

> Companies are now trying to increase their numbers of female professionals

the end of the evening, often around midnight. It is normal to leave immediately after the meal, so anyone who can deal with a full stomach last thing at night and little sleep is still in with a chance of beating their colleagues at squash in the morning.

The pub scene is lively, with as many as 100 pubs or bars, so there are many alternatives to the round of dinners at people's homes. Beer is cheap and on tap, and they are full of well-heeled young Bangalorians. Some are more popular with IT staff than others, such as The Pub World with its loud music, or Black Cadillac with its many expats and armies of women in black leather.

Stumble down the stairs into The Underground – not quite artfully decorated enough to look like a London Tube station – and the pub will be thronged with serious-looking people, mostly men, discussing the finer points of cricket and computers. There's even a society for techie tipplers – the Beer Drinkers' Association of Information Technology, or 'Bait' for short.

The only drawback is the licensing laws, which prevent bars serving alcohol after 11pm. A typical evening might end in a 24-hour coffee shop in one of the many five-star hotels built to cater for the large number of business visitors.

The local software professionals have the disposable income to deal with an active lifestyle. An average salary for a fresh BTech, according to Kar, is around Rs12,000 (£188) and pay rises steeply. Mr Chainani says there are many young people who have built up a wealth of Rs5m. "Not only does the money go a lot further here, but you have all the comforts of life. And you are somebody here.

"It's the people at small companies, with only a salary and no stock or share options, who may be looking to the US." The exodus of trained personnel abroad, especially to the US where salaries can be 10 times as high, is taken very seriously by the IT companies.

"I believe companies like Tata lose a lot of employees," Mr Chainani says.

Many companies have moved to tackle staff attrition rates, which are reckoned to be as high as 25 per cent. Infosys rewards employees with stock options, and loses far fewer staff than the industry norm. "The company has been successful arguably because it has concentrated on keeping people," Mr Chainani says.

Employee ownership of 15-20 per cent of a company is normal in the technology sector, says Mr Kar. His staff own 17 per cent of Microland. Infosys is also among market leaders preparing to seek US Nasdaq listings, partly in order to be able to offer dollar stock options to highly skilled staff as an extra incentive to stay.

The question of how to keep staff throws into relief the issue of the number of women software engineers.

"There are very few women – less than 5 per cent," says Mr Kar. "And virtually no women at a senior level." A large part of the reason is the traditional route via a background in engineering, physics or maths, which have tended to be unpopular subjects with women. But many companies are now trying to increase their numbers of female professionals, partly because they tend to be more stable and less likely to look abroad for a reason to leave their company.

The companies may succeed in curbing the high rate of job mobility among Bangalore's software engineers, but it looks like their upward mobility still has many miles in it.

Pradeep Kar, 39, managing director of Microland in Bangalore: the company has more than 2,000 clients

NASDAQ LISTINGS

Signs of growing confidence

From facing page:

such as Bermuda and use these as springboards for seeking Nasdaq listings.

"We plan to take this company for a listing on Nasdaq sometime next year," says Shiv Nadar, the dynamic chairman of HCL. He sees the Nasdaq market as a possible source of funds to help him turn HCL into a global software group, both through organic growth and selective acquisitions, probably in the US.

Several joint venture and quoted companies – including Delhi-based IIS Infotech and Bombay-based Rave Computers, whose sister company, the Karnatica group, is based in Britain – are still considering their options.

Meanwhile, Bangalore-based BFL Software says it is looking at introducing international employee share options as a way to reduce staff attrition rates, which are as high as 25 per cent in much of the Indian industry. Too many young software engineers leave to take up jobs paying up to 10 times their Indian salaries in the US, Singapore and the Middle East.

"Attrition is our biggest problem," says Anand Jhaveri, managing director of Rave, a fast-growing software start-up, working on state-of-the-art applications mostly for customers in the UK. He, like other Indian software entrepreneurs, believes that being able to offer loyal employees dollar or sterling denominated share options would help retain staff.

For the time being, however, Rave and other small software start-ups try to retain their best software engineers by paying generous bonuses.

Shiv Nadar, dynamic chairman of HCL: he sees the Nasdaq market as a possible source of funds for global expansion

SUPPLIER PROFILE: MICROLAND • By Rohit Jaggi

Building on a solid network

Bangalore-based Microland is a rapidly expanding competitor in India's high technology sector

Aggressive, forward-looking and market-responsive are descriptions that epitomise companies at the leading edge of information technology in India. They apply particularly aptly to Microland, a young Bangalore-based company.

Its mission is to "provide the highest value networking and communication services and solutions in the global market place".

According to Vinnie Mehta of the Manufacturers' Association for Information Technology, "It's a very young and aggressive company, with a young chairman." The management team's average age is 37, and that of employees just 27.

As the country's biggest independent networking specialist, Microland's tally of 2,000-plus clients has propelled it into the IT-sector's top-20 by turnover for the first time this year.

The eight-year-old company's growth has not been driven by low pricing. "Normally we are at least 5 per cent more expensive than anyone else," says Pradeep Kar, 39, its chairman and managing director.

"We chose to position ourselves as a premium provider. We lose many deals. We win the rest."

The company is also careful not to over-extend itself. "We don't take on projects worth over Rs100m," Mr Kar says.

Turnover last year was Rs15.7bn, 39 per cent up on the previous year. That was down steeply on the previous year's growth of 69 per cent. But according to Mr Kar, Microland is in no danger of failing to achieve its ambition of doubling or more the whole-industry turnover growth. Last year that figure was 13 per cent.

Despite the slowing of growth last year, Mr Kar insists that there has been no fall in the number of systems integration or turnkey projects.

Microland was a pioneer in Indian networking, designing new systems and integrating existing ones. It supplies hardware, but only as part of networking package. What the company can now offer its clients, which range from financial services companies to large corporates and telecommunications giants and include Bank of America, Morgan Stanley, Hindustan Lever and VSNL, is alliances with a wide range of global IT leaders.

"We're the only guys in the big league," says the softly spoken Mr Kar. In 1992 Microland was the first to introduce Compaq into India, and it also scored a first with Netscape. It now has some 30 alliances with partners including Sun, Intel and Compaq on the hardware side, and Nicrosoft, Novell and Unix in software.

It also aims for long-term relationships with its customers, and 60 per cent of revenues come from existing clients.

Most of the company's customers are in the private sector. This leaves largely untapped the opportunities in the public sector, which is making swift strides from piles of paper to personal computers.

According to Bangalore-based management consultant Sunil Chainani: "The PC explosion is going to take off. The cost is very favourable – there's been a 30-40 per cent drop in price in one year, and only 10 per cent of that was because of a rationalisation in duties.

"Almost everyone in every sector is beginning to use a PC – railway stations and schools as well as homes."

But Mr Kar is happy with the company's focus on the private sector and suspicious of the public sector because, he says, decisions take too long. Also, he says "they buy just on price", and he has encountered a lack of honesty.

MicroUniv, the company's training arm, focuses on "networking-centric applications", Mr Kar explains. It provides teaching at clients' premises or at 14 of its own sites in six cities. "We're a career-enhancement community," says Mr Kar. "But the main point of the training operation is to make money."

In India's fast-changing environment, Mr Kar's aim of regenerating the company every two to three years makes sense. "Because we're small and flexible, we're able to implement change faster – we're doing it before other companies," he says.

MicroWeb was set up two years ago as an Internet division, and it also focuses on the now-fashionable business of building corporate intranets.

The Internet has huge potential, Mr Kar stresses, and a 30 per cent growth in Indian Internet connections last year backs this up. Liberalising reforms which will stimulate the market by opening up the field to independent Internet service providers, initially using the existing monopoly VSNL as a gateway but eventually with their own gateways, have been approved by cabinet. But parliamentary ratification has been held up partly by concerns that cheap and easily available access to the Internet would lead to a significant proportion of telephone voice traffic emigrating from conventional routes. Microland is hoping for a significant chunk of business offering the new internet service providers a range of services from design to build, operate and transfer. As a measure of the potential, Mr Kar reckons that there will be "in excess of 100 ISPs" within about two years.

There is risk, too, in this direction. "Nobody knows how or when ISPs will take off," says Mr Chainani. "Many people are scared that they will turn out like private airlines." The private internal air carriers generally failed to fulfil their early promise, partly because they ran into new regulatory restrictions. "No one is yet enthused," he adds. "Everyone wants it – no one knows when or how affordable it will be."

Until last year Mr Kar was also CEO. He says the size of the company – 560-plus employees in nine cities – meant he "couldn't do justice to the present or the future". One idea he is mulling over is franchising, but for the moment Mr Kar's response is a qualified "not yet". He says he must first resolve his own doubts about the size of the investment and the ability to maintain high quality standards.

Microland is not among the leading software exporters such as Infosys and DFL Software. Across the industry, 60 per cent of software exports are to the US. However, Microland already works with Sygma Soft in Singapore and Mitsubishi in Japan, among others. It is planning a determined assault on this prized market. "In the next five years 25 per cent of our business will come from exports," says Mr Kar. "To a large extent to the US."

TECHNICAL TRAINING • By Mark Nicholson in New Delhi

Sharp focus on the future

Two companies, Aptech and NIIT, are India's biggest IT trainers, equipping together up to 300,000 people a year

Graduate students or working managers who have undergone IT training provided by NIIT and Aptech are often referred to, slightly cutely, as Niitians and Aptechites. Hundreds of thousands of them are snapping up information technology jobs every year in India. These alien-sounding creatures are also increasingly cropping up elsewhere in the world – from South-east Asia and China to Europe and the US. In reality, there's actually nothing very Star Wars about them, save perhaps their sharp eyes on the future.

As India's two biggest private computer and software education companies, NIIT and Aptech account for about four-fifths of India's blossoming IT training industry. Together they claim to equip up to 300,000 Indians a year (or Niitians and Aptechites, as these highly brand conscious companies like to tag their students) with tutoring and qualifications in anything from basic use of Windows 95 to leading edge multimedia skills.

Both companies are already among India's top 10 IT companies, according to the annual league table compiled by Dataquest, the industry magazine, and are climbing. Last year NIIT's turnover rose 70 per cent to Rs4.5bn ($124m), roughly half directly from training, the remainder from sales of IT education and other software. Aptech, meanwhile saw sales rise 24 per cent to Rs230m, virtually all from its panoply of IT training courses.

Moreover, India's market leaders in IT education are increasingly succeeding in selling their branded courses and training tools overseas. Both have operations in more than 20 countries. And between them they are fast creating for India a global niche as a provider of high-quality, low-cost private IT education. The driving force, however, is a booming Indian market for software and IT training, which is being pulled along by annual growth exceeding 50 per cent in the nation's software industry overall. According to Dewang Mehta, executive director of the National Association of Software and Service Companies, the industry association, the success of these companies is also a measure of the degree to which software and IT have caught the imagination of educated Indian youth as a career path.

"Once upon a time every Indian mother wanted her child to be a doctor or a lawyer," he says. "Today they are all asking if their sons and daughters can be software engineers."

The appeal is clear enough. A student earning a basic programming diploma from Aptech, says Pradeep Sharma, the company's vice president, can expect to find a job paying at least Rs5,000 ($138) a month – twice the entry level salary for India's civil service. Upper-end salaries for more highly qualified IT and software engineers are among India's highest – only the financial services industry pays better, according to Mr Mehta. He points out that better qualified software professionals can expect starting salaries of Rs12,500 a month, rising on average to Rs83,000 with 10 years' experience.

These are large sums in India, where GDP per capita is just above $230. Small wonder there is scarcely a commercial district in any decent-sized Indian town which is not strung with cheap cloth banners advertising IT education.

Many such adverts are for a thriving grey market of small-time operators offering little more than garage-like premises, a couple of computers and a tutor or two. Hence the energy both Aptech and NIIT apply to branding their own training courses and tools.

Each company offers the widest possible range of training, from basic understanding of Windows to more specialised diploma courses in IT communications technology or multimedia. Each offers predominantly parallel training, done while students are either at work or studying for other degrees. Courses range from short part-time studies to full four-year degree-equivalent qualifications. Neither, though, can directly offer an Indian degree, which remains formally the preserve of India's public education system. Aptech, though, has begun offering a degree course under the auspice of the Open University of British Colombia, which will offer students a Canadian-recognised graduate qualification.

Each company also offers Indian and multinational companies both courses for working executives and tailored IT course programmes. "Any company worth its salt in India is a customer of ours," says Rajendra Pawar, NIIT's founding managing director.

Where the companies differ is in their approach to branding their products. Aptech recently separated out its educational arm from its software division, which became Hexaware, a distinct sister software export and development company. Aptech also chooses to market each of its specialist courses under separate banners. Its flagship, accounting for 80 per cent of revenues, is Aptech Computer Education. This offers students a range of mass education courses at various levels in software engineering and systems management.

Aptech then separately markets three other branded course programmes: Hardcore, a series of courses in networking and telecoms; Asset, which covers training in Oracle Powerbuilder, C++ and other areas designed to meet the needs of India's export industry; and Arena, a course in multimedia, graphics and animation.

NIIT, however, has evolved a more holistic approach to its brand. It places particular emphasis on what it sees as a creative symbiosis between its training and software departments. As such, says Mr Pawar, the company is resisting the temptation to allow its faster-growing software arm to outstrip its educational department.

The company's software exports – chiefly of educational software – have risen to $50m in the past seven years. They now account for about half the company turnover. And there it will stay, proportionately, says Mr Pawar.

"The software market is very much bigger than the IT training industry," he says. "So there's a bigger market out there. But we have decided we'd rather keep building the company in an integrated way."

Moreover, unlike Aptech, NIIT also sees itself as playing an innovative role in giving India's nascent computer mania a wider push. It has established a series of Computerdromes around India, which, are well-equipped computer centres where students can take NIIT courses. It is also pioneering family clubs, where volunteers give over their home personal computers to neighbourhood kids, supplying specially tailored NIIT CD-roms and other education aids. Earlier this year NIIT also sponsored a national TV computer education series carried by Doordashan, the state broadcaster, called Boot-IT.

While part corporate altruism to raise computer consciousness among the estimated 280m Indians with televisions, it is also a strong NIIT branding exercise.

"It makes it possible for millions of consumers to become aware of our product without having to spend anything. It's the old marketing thing where you let people smell your perfume by putting it free inside a glossy magazine," says Mr Pawar.

And next, the world. NIIT has wholly-owned subsidiaries in the US, Europe, Japan, Singapore and other South-east Asian capitals. Aptech, too, is extending its global reach in Asia, Europe and the US, where it recently opened an Aptech training centre in Princeton, New Jersey. "We can find a niche in these countries, no doubt," says Aptech's Mr Sharma. "We offer cheaper, but quality services in these markets. And as far as private computer education is concerned, India has a lot to offer. It's one of the only places where computer education is so well organised and where the brands are so strong."

Leading Indian software companies are investing heavily in training

SOFTWARE INDUSTRY'S GLOBAL EXPANSION

Shift towards offshore work

Continued from Page 1 of this review:

However, most analysts agree that low costs are unlikely to provide a sustainable competitive advantage.

An entry-level software programmer in India can expect to earn about Rs150,000 (£3,000) to start with, rising to around Rs1m (£20,000) after 10 years. This is low by international standards, but a respectable salary in Indian terms. As competition grows for the best graduates and engineers with experience, salaries are rising rapidly, and attrition rates – the main problem for the industry – remain high.

According to Nasscom, salaries increased by about 20 per cent last year. However Mehta points out that productivity is also rising rapidly. In 1992 productivity was around $21,000 per engineer. By 1996 the figure had risen to $45,000. As a result, India is still very cost-competitive.

Nevertheless, most industry leaders acknowledge that India will face greater competition from even lower cost countries such as China in the future.

"China may be a threat in the longer term," says V Chandrasekaran, president of Wipro Infotech, "but we still have a big advantage."

To counter that threat, Indian software developers are adopting a range of strategies to move up the value-added chain, and to position themselves at the centre of an emerging regional software hub which could eventually include neighbouring nations.

Some companies, including HCL, suggest they may build software factories in China itself. In addition, India's geographic position has given it a time zone advantage with both Europe and the US. This enables India to exploit the rapidly expanding international market for outsourced software services, including the expanding market for "remote maintenance". Indian software engineers can fix bugs or upgrade systems overnight while their users in western companies sleep.

India's emergence as a key centre for software has coincided with big changes in the way IT is used, including the trend away from mainframes to client-server computing based on desktop personal computers and inter-networking – an area in which India has strengths.

Since the mid-1980s, there has been a growing shortage of software engineers in the west. This, coupled with the pronounced trend towards "outsourcing" non-core operations in US and European companies, has been one of the main driving forces behind the growth of the Indian industry. Equally significantly, there has been a marked shift away from on-site development services or "body-shopping" – where work is undertaken at the customers' site – to offshore services taken care of in India. This shift towards offshore work has been underpinned by two key factors. First, Indian software companies have adopted quality standards enthusiastically – 58 Indian companies already have ISO 9000 certification.

Second, the leading Indian software companies are investing heavily in training, and in leading-edge programming skills such as computer-aided software engineering, fourth generation languages, object-orientated programming, graphical-user interfaces, Java programming, and increasingly, Internet and electronic commerce technologies. Several companies have established close links with India's top universities, moves which have the added benefit of helping recruitment in a competitive market for India's top brains.

Similarly, a growing number of the top-tier domestic Indian software developers are beginning to invest in R&D and the creation of their own software packages and services. A handful of Indian companies including Tata Consultancy Services, Infosys, Ramco and Mastek have already developed successful software packages mostly for the domestic market. And others, including BFL in Bangalore, are beginning to take steps towards developing their own shrink-wrapped products.

Meanwhile, the Indian industry is also gearing up for a millennium bomb bonanza. Still, most companies have adopted a cautious approach and limited this work to not more than 20 per cent of turnover.

In the longer term, analysts argue that India's competitive advantages will come from ensuring productivity and quality. But the Indian industry still has barriers to overcome if it is to reach its full potential.

In particular, infrastructure problems, particularly extended daily power cuts and water shortages in software centres such as Bangalore, threaten to curtail growth. These concerns, coupled with a desire to cast a wider recruitment net, are encouraging fast growing companies such as HCL, Infosys and Wipro to expand their operations in other emerging software centres such as Madras, Pune and Hyderabad.

India can already be justifiably proud of the achievement of its software sector. However, as Mr Kanodia points out: "We think we're doing very well, but India is still only a very small player in the global software industry." For most Indian software entrepreneurs that simply means there is still a tremendous growth opportunity if, as Bill Gates suggested on a visit to India earlier this year, India is indeed to become "a software superpower".